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1982

Capital Investments of the World Petroleum Industry

by

David J. Behling Jr., *Vice President*
Ranich Isquith, *Vice President*
Richard S. Dobias, *Second Vice President*
Norma J. Anderson, *Assistant Treasurer*

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CHASE

FOREWORD

For many years the Energy Economics Group of The Chase Manhattan Bank has conducted a detailed study of the annual financial performance of the larger non-OPEC petroleum companies called the Chase Group. This study is published under the title *Financial Analysis of a Group of Petroleum Companies.* While the combined capital spending of the Chase Group constitutes a large proportion of the worldwide capital spending of the petroleum industry, for some time it has accounted for less than one-half of the total. Thus, one purpose of this study is to extend the coverage of capital spending for the Chase Group, as presented in *Financial Analysis of a Group of Petroleum Companies*, to an estimate for the entire industry.

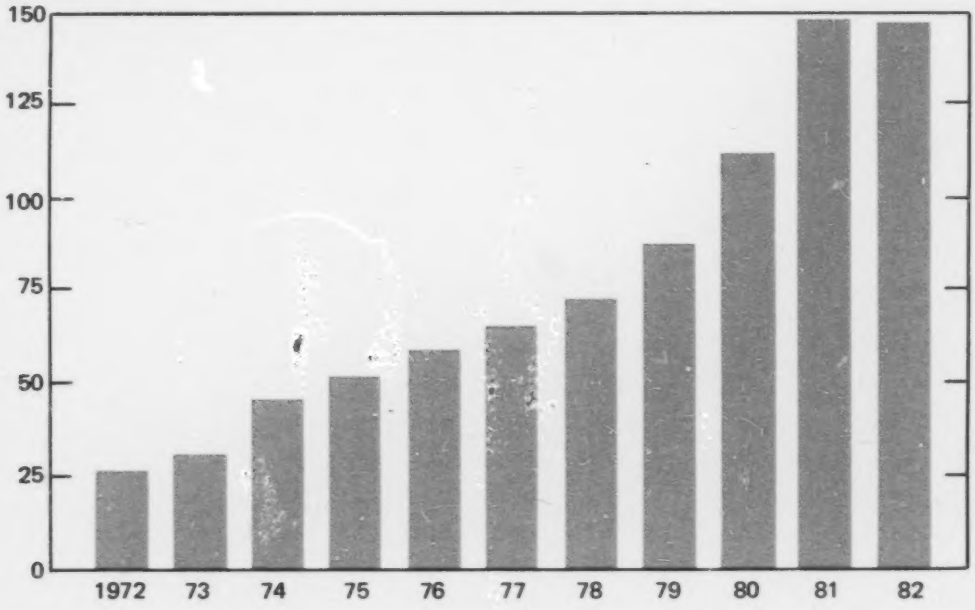
Additional data have been obtained from surveys of a great many investor and government-owned operating entities. The sum of all the information gained has provided a base from which we have derived a reliable estimate of the worldwide capital investments of the petroleum industry for 1982. A corresponding estimate of worldwide capital investments for 1983 is contained in the Chase publication, *World Oil and Gas: Prices, Production, Profits, Capital Spending, Financing*, along with forecasts for the 1984 to 1990 period.

This year, two additions have been made to the appendix of this report. First, each of the different functional investment categories are defined and differences in coverage between that followed in this publication and that in the *Financial Analysis of a Group of Petroleum Companies* are explained. Second, a new schedule has been added which breaks down worldwide capital expenditures between those carried out by the Chase Group and those by the rest of the industry.

CAPITAL AND EXPLORATION EXPENDITURES

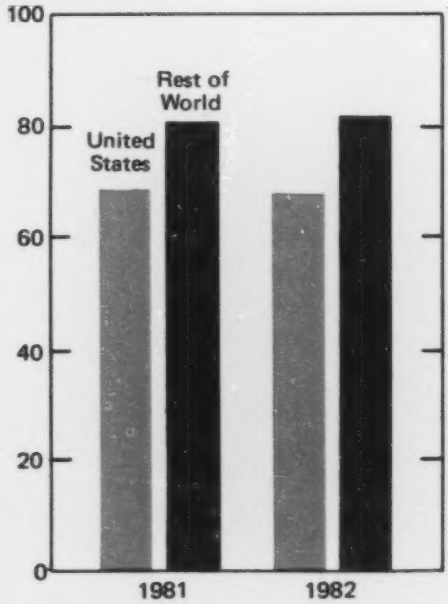
Worldwide

billions of dollars



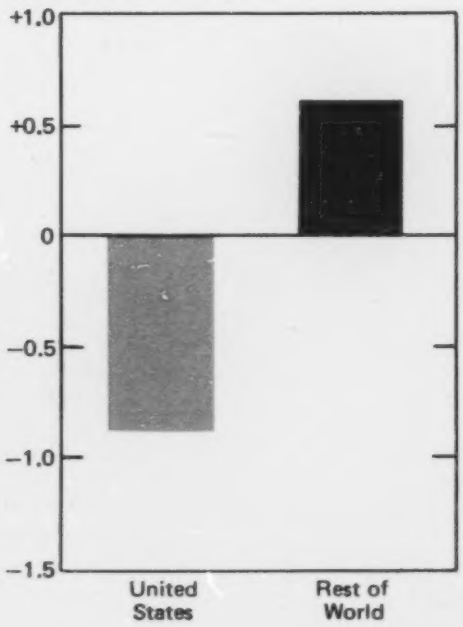
United States and Rest of World

billions of dollars



Change from 1981

percent



Highlights of CAPITAL EXPENDITURES IN 1982

Worldwide Capital and Exploration Expenditures

- 1982 brought an abrupt halt to the rapid growth in capital spending that had been ignited by the 1979-80 crude oil price explosion. Indeed, for the first time in 21 years, capital and exploration spending declined, although only fractionally, from $149.2 billion to $149 billion.

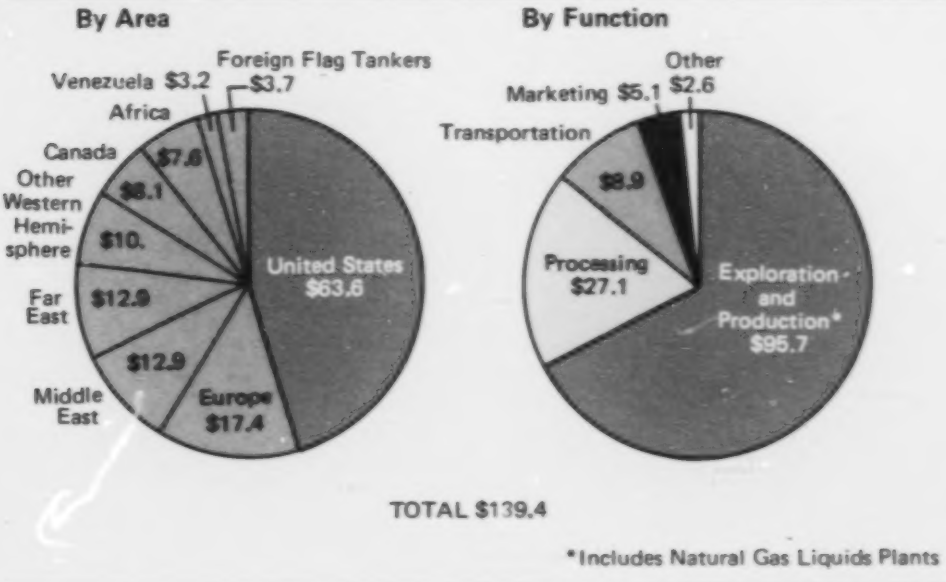
- The slight decline in 1982 was in sharp contrast to the three consecutive, record-setting, year-to-year increases of $14.5 billion, $26.2 billion and $36.1 billion established in 1979, 1980 and 1981, respectively. In recent years, most industry participants expected that oil prices would continue to increase more rapidly than general inflation. In 1982, however, price expectations began to be modified downward, as consumption of oil products in the non-Communist world declined for the third year in a row, and spot prices weakened, particularly in the last quarter of the year.

- In addition, profits in 1982 were sharply lower and internal cash flow was also down, further influencing companies to reduce expenditures.

- Excluding exploration expenses, capital expenditures in the non-Communist world totaled $139.4 billion for 1982. This compares favorably with Chase's preliminary estimate of $138.8 billion for 1982, presented in our earlier publication, *World Oil and Gas: Prices, Production, Profits, Capital Spending, Financing*. In 1983, worldwide capital expenditures decreased substantially. This reduction reflected concern over declining prices and profits, substantially lower drilling costs, dampened enthusiasm for frontier areas and a slowness on the part of governments to reduce their fiscal takes in line with lower prices and profits. The next edition of this publication will contain final and detailed estimates of 1983 worldwide capital spending. Preliminary estimates are contained in *World Oil and Gas*.

WORLDWIDE CAPITAL EXPENDITURES – 1982

billions of dollars



TOTAL $139.4

*Includes Natural Gas Liquids Plants

Regional or Geographic Breakdown

- Capital expenditures in the United States totaled $63.6 billion, or 46 percent of the total for the world. This 1982 share for the U.S. was almost the same as that in 1981, but up sharply from 36 percent in 1978. The increased attractiveness of the U.S. to the industry since 1978 has been a result of several factors, including a relaxation of U.S. crude oil price controls in 1979, increased wellhead gas prices following the passage of the Natural Gas Policy Act, substantially increased cash flow and debt capacity among corporations headquartered in the U.S. and an influx of new sources of funds.

- Capital expenditures in Western Europe totaled $17.4 billion, with large ongoing amounts of investment in exploration and development of the North Sea. The next highest amounts in 1982 were spent in the Middle East and the Far East, with each area's expenditure equaling nearly $13 billion.

- Expenditures in the Far East increased more than in any other region. This healthy performance reflected the lower sensitivity of this area to the worldwide recession and the growing

appreciation of the favorable drilling prospects available in the area.

Functional Breakdown

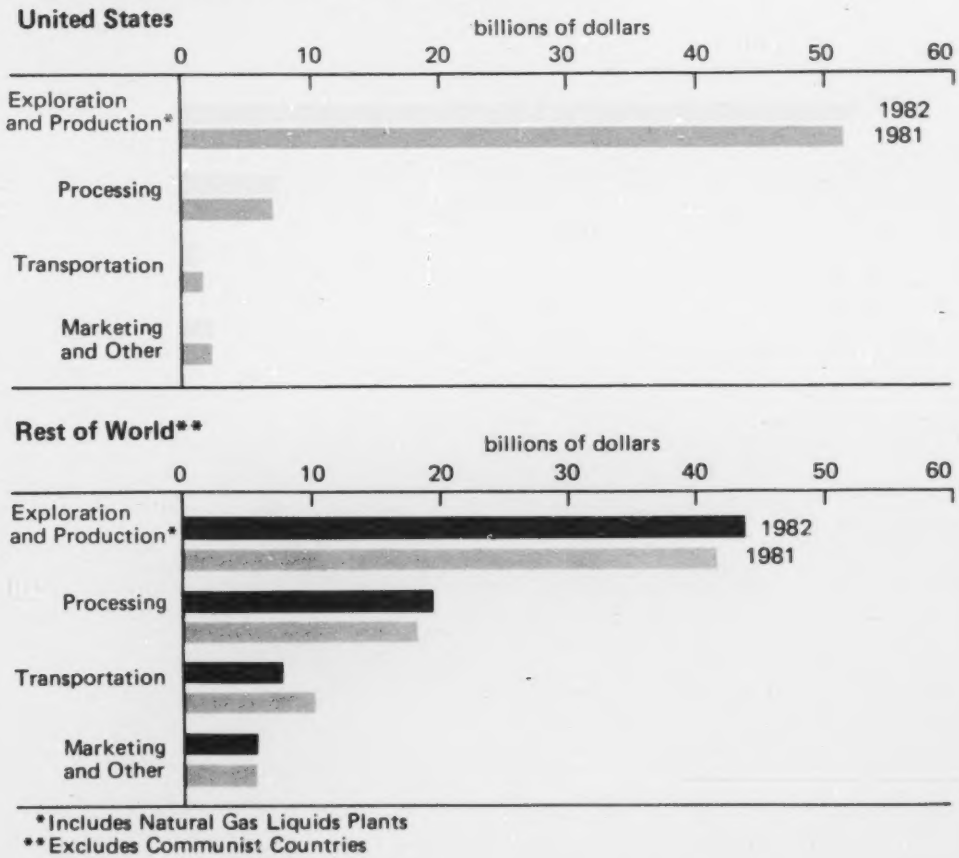
- The $95.7 billion industry outlay for exploration and production remained the greatest single expenditure accounting for 69 percent of all capital expenditures. The next largest functional sector was for processing, as refinery and chemical plant expenditures absorbed 19 percent, or $27.1 billion. Transportation accounted for only 6 percent, the lowest proportion on record for that purpose. Marketing was 4 percent of the total, unchanged from the previous year.

- Capital spending for exploration and production was up slightly from that in 1981 in both the United States and the Rest of the World, as was the investment for processing (refineries and chemical plants). Outlays for transportation and marketing were down in total.

- Regarding spending for refineries, despite the sluggish worldwide demand outlook, there were capacity expansions in selected countries for import substitution purposes as well as for the export market. In addition, there were increased refinery investments for heavy oil conversion.

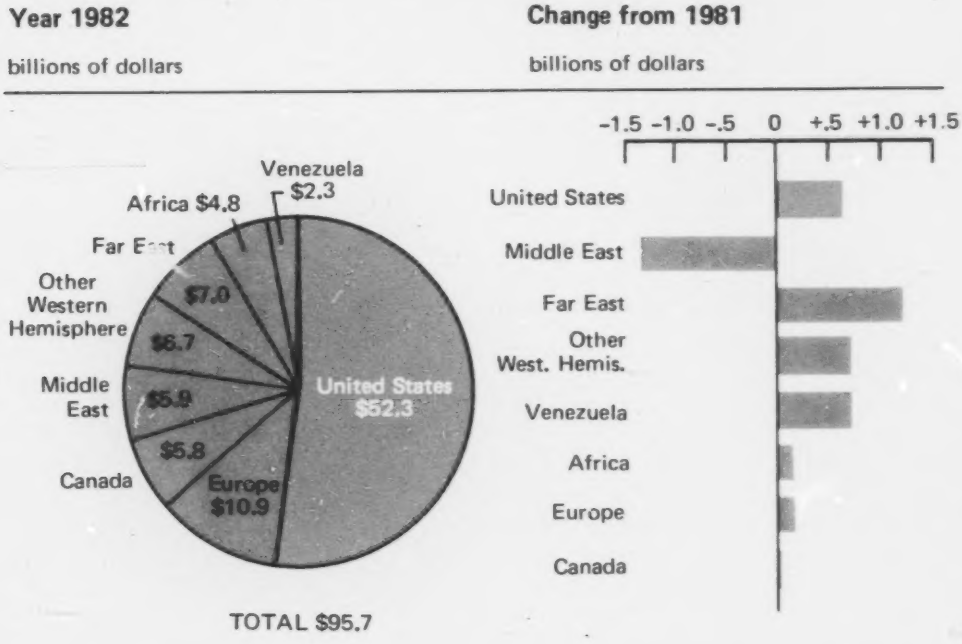
- Pipeline investments decreased by $2.4 billion. Expenditures dropped in nearly all geographic areas, as some major pipeline projects were completed and few new ones started. This decline, combined with a $0.7 billion decline in tanker outlays, resulted in a larger reduction in the transportation sector than in any other functional category.

WORLDWIDE CAPITAL EXPENDITURES BREAKDOWN BY FUNCTION – 1982 VS. 1981



*Includes Natural Gas Liquids Plants
**Excludes Communist Countries

CAPITAL EXPENDITURES – EXPLORATION AND PRODUCTION



- Worldwide, the $2.3 billion increase in exploration and production spending to $95.7 billion was considerably less than the average increase of $18.6 billion during the three years immediately preceding, when the outlook for petroleum demand and prices was far more favorable.

- In the U.S., total capital spending for exploration and production increased $0.6 billion to $52.3 billion. However, spending on lease acquisitions and for seismic activity (geological and geophysical expense) declined sharply. Such declines usually lead to subsequent declines in drilling and related capital expenditures.

Chase Group Versus Rest of Industry

- Of the total 1982 worldwide capital expenditure of $139.4 billion for the industry, 42 percent, or $59 billion, was made by the group of 24 companies comprising the Chase Group, whose results are reported annually in Chase's publication entitled, *Financial Analysis of a Group of Petroleum Companies*. By comparison, in 1973, the Group's share equaled 45 percent.

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Photographs used in this report were furnished through the courtesy of Exxon Corporation.

Definitions of Investment Categories

This annual report is intended to cover all capital investments made with regard to crude oil and natural gas production and use. Thus, investments by the petroleum industry for non-petroleum purposes such as coal, nuclear, other minerals, or any type of other business activity are not included. Also excluded are the funds expended by one petroleum entity for the acquisition of already existing petroleum assets from another entity, since the initial expenditures for such assets have been recorded in earlier year investment totals.

The petroleum industry is defined to include five primary functional categories: exploration and production, transportation, manufacturing, marketing and other (primarily general administration). We have made some further distinctions by category. Their application in this study is indicated here.

Exploration and Production, for purposes of this report, represent the search for and development and production of crude oil and natural gas. It also includes natural gas liquids and liquefaction plants, shown as natural gas liquids plants in the accompanying tables.

Transportation is separated into two categories: pipelines and tankers. Pipelines include crude oil, natural gas and refined liquid product lines. However, not included in pipelines are natural gas transmission pipelines since they usually come under some form of government rate regulation and are, therefore, more appropriately considered utility operations. Tankers include all vessels used in the transportation of crude oil, refined products, LPG and LNG, regardless of ownership of the vessels.

Manufacturing encompasses refineries used in the processing of crude oil and includes related storage and terminaling facilities. Chemical plants, also part of the manufacturing category, are an extension of processing and cover items such as petrochemicals, plastics, fertilizers, etc. Only the chemical activities of petroleum companies are included.

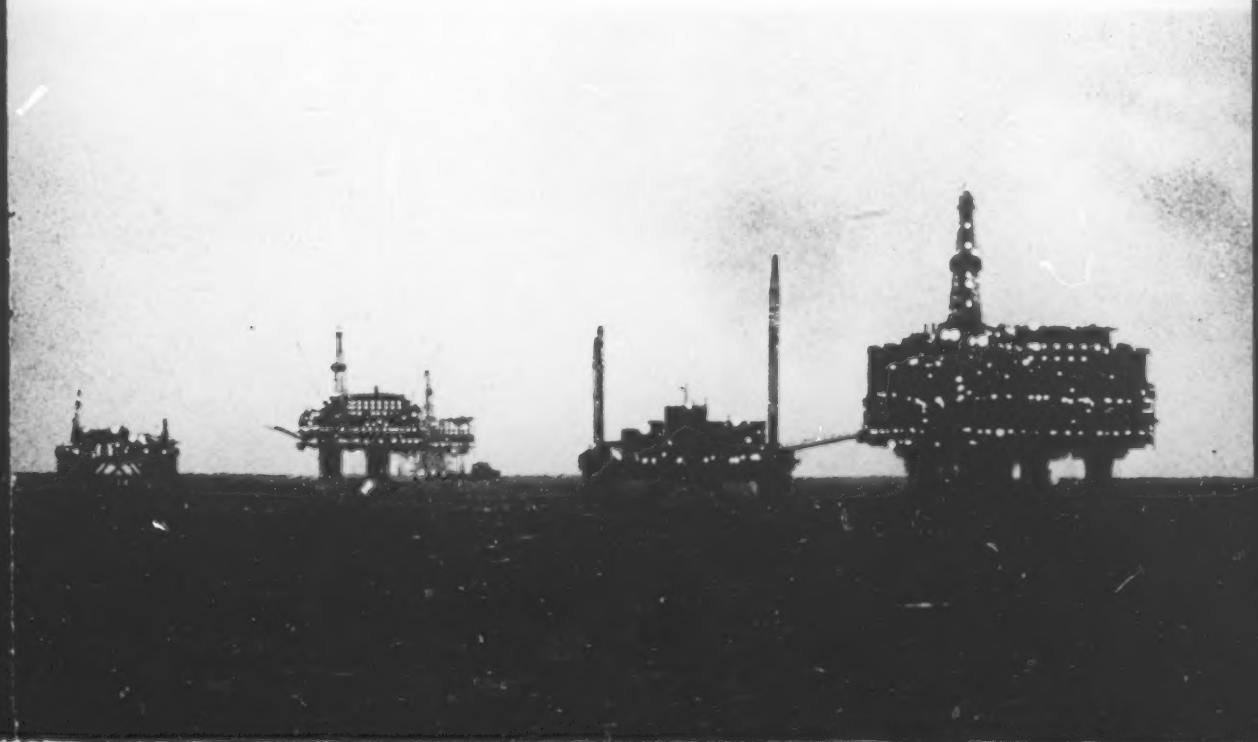
Marketing is comprised of all service stations, bulk plants, terminals and trucks or other transportation equipment used to deliver products to a marketing facility.

The category **Other** primarily consists of administrative and miscellaneous transportation facilities not included in the pipeline, tanker and marketing categories.

In addition, after summarizing the capitalized investments, we report the cost of geological and geophysical expenses, as well as lease rentals. These non-capitalized costs are exploration expenses normally charged against revenue at the time they are incurred.

Chase also publishes a report, entitled *Financial Analysis of a Group of Petroleum Companies*, which contains capital spending data for a number of the larger non-OPEC petroleum companies, known as the Chase Group. The capital expenditure data reported in that study include all capital investments made by those companies, including non-petroleum capital expenditures. Thus, investments for coal, nuclear, other minerals, as well as any type of other business activity, are included.

The Chase publication, *World Oil and Gas: Prices, Production, Profits, Capital Spending, Financing*, contains preliminary estimates of capital expenditures directly comparable to the historical data in this publication, although in a more aggregated format. *World Oil and Gas* contains forecasts as well.



SCHEDULE 1 CAPITAL AND EXPLORATION EXPENDITURES Year 1982

	United States	Canada	Venezuela
	Million Dollars		
Crude Oil and Natural Gas	50,900	5,375	2,300
Natural Gas Liquids Plants	1,375	450	50
Total Exploration and Production	52,275	5,825	2,350
Pipe Lines	775	200	25
Tankers	525	0	0
Refineries	5,350	950	600
Chemical Plants	2,200	500	50
Marketing	1,400	275	75
Other	1,025	300	100
Total Capital Expenditures	63,550	8,050	3,200
Geological & Geophysical Expense and Lease Rentals	4,500	750	525
CAPITAL & EXPLORATION EXPENDITURES	68,050	8,800	3,725

SCHEDULE 2 GROSS INVESTMENT IN FIXED ASSETS December 31, 1982

Crude Oil and Natural Gas	210,625	32,550	10,950
Natural Gas Liquids Plants	7,875	2,775	600
Total Exploration and Production	218,500	35,325	11,550
Pipe Lines	22,025	2,475	665
Tankers	4,975	0	0
Refineries	36,025	5,950	3,200
Chemical Plants	24,950	1,875	135
Marketing	17,125	3,175	375
Other	6,675	1,350	375
TOTAL GROSS INVESTMENT	330,275	50,150	16,300

SCHEDULE 3 NET INVESTMENT IN FIXED ASSETS December 31, 1982

Crude Oil and Natural Gas	155,200	27,895	5,760
Natural Gas Liquids Plants	4,325	1,895	355
Total Exploration and Production	159,525	29,790	6,115
Pipe Lines	14,365	1,285	145
Tankers	3,045	0	0
Refineries	20,065	3,505	2,145
Chemical Plants	13,295	1,440	130
Marketing	7,655	1,660	250
Other	4,010	1,155	310
TOTAL NET INVESTMENT	221,960	38,835	9,095

Other Western Hemisphere	Western Europe	Africa	Middle East	Far East	Unallocated	Free World
			Million Dollars			
6,100	10,500	3,750	3,675	6,200	0	88,800
600	350	1,025	2,225	800	0	6,875
6,700	10,850	4,775	5,900	7,000	0	95,675
650	625	900	975	525	0	4,675
0	0	0	0	0	3,750	4,275
900	2,600	750	3,600	3,450	0	18,200
1,200	1,550	700	1,975	700	0	8,875
350	1,525	325	275	875	0	5,100
225	300	125	225	325	0	2,625
10,025	17,450	7,575	12,950	12,875	3,750	139,425
750	1,275	675	325	800	0	9,600
10,775	18,725	8,250	13,275	13,675	3,750	149,025
25,725	57,700	15,925	21,350	20,125	0	394,950
2,775	2,350	6,625	13,700	5,075	0	41,775
28,500	60,050	22,550	35,050	25,200	0	436,725
8,850	8,950	6,750	13,975	3,875	0	67,565
0	0	0	0	0	58,475	63,450
14,150	36,250	7,200	17,400	27,800	0	147,975
8,650	18,675	3,325	8,500	4,575	0	70,685
3,500	20,225	2,975	1,300	8,700	0	57,375
1,725	3,200	725	2,025	2,175	0	18,250
65,375	147,350	43,525	78,250	72,325	58,475	862,025
18,930	51,140	12,670	13,480	16,760	0	301,835
2,280	1,910	5,430	12,105	4,175	0	32,475
21,210	53,050	18,100	25,585	20,935	0	334,310
6,140	6,165	4,835	10,475	3,055	0	46,465
0	0	0	0	0	46,175	49,220
9,065	19,455	5,370	14,085	17,410	0	91,100
6,855	11,805	2,995	7,565	3,225	0	47,310
1,160	7,385	1,125	625	4,075	0	23,935
1,335	2,500	530	1,315	1,765	0	12,920
45,765	100,360	32,955	59,650	50,465	46,175	605,260

SCHEDULE 4 CAPITAL AND EXPLORATION EXPENDITURES

	1972	1973	1974	1975
	Million Dollars			
WORLD				
Crude Oil and Natural Gas	9,590	12,415	18,765	18,295
Natural Gas Liquids Plants	515	510	770	960
Pipe Lines	1,230	1,230	2,460	5,995
Tankers	3,775	6,550	8,900	9,240
Refineries	4,955	4,865	7,720	8,725
Chemical Plants	1,350	1,175	1,995	3,145
Marketing	2,825	2,480	2,215	2,160
Other	710	770	875	1,105
Total Capital Expenditures	24,950	29,995	43,700	49,625
Geological & Geophysical Expense and Lease Rentals	1,540	1,700	2,185	2,325
COMBINED	26,490	31,695	45,885	51,950
UNITED STATES				
Crude Oil and Natural Gas	5,740	7,290	11,225	9,055
Natural Gas Liquids Plants	175	150	225	325
Pipe Lines	300	450	1,400	3,500
Tankers	125	100	200	225
Refineries	900	1,050	1,775	2,100
Chemical Plants	450	425	825	1,500
Marketing	1,100	850	650	650
Other	260	325	325	370
Total Capital Expenditures	9,050	10,640	16,625	17,725
Geological & Geophysical Expense and Lease Rentals	740	850	1,130	1,195
COMBINED	9,790	11,490	17,755	18,920
CANADA				
Crude Oil and Natural Gas	850	1,000	1,150	1,125
Natural Gas Liquids Plants	100	75	150	150
Pipe Lines	60	80	75	160
Refineries	325	290	400	410
Chemical Plants	10	15	30	70
Marketing	150	155	190	175
Other	30	35	80	120
Total Capital Expenditures	1,525	1,650	2,075	2,210
Geological & Geophysical Expense and Lease Rentals	150	175	225	200
COMBINED	1,675	1,825	2,300	2,410

1976	1977	1978	1979	1980	1981	1982
			Million Dollars			
23,860	28,680	33,675	44,500	61,300	85,400	88,800
1,915	3,780	4,030	4,565	5,575	7,975	6,875
7,575	6,660	5,780	5,775	6,475	7,075	4,675
8,675	3,700	2,950	2,250	3,400	4,950	4,275
6,910	8,290	10,675	11,775	13,475	17,175	18,200
4,500	6,375	6,650	7,235	8,300	8,400	8,875
2,180	2,670	3,240	3,750	5,050	5,200	5,100
1,110	1,425	1,375	1,775	1,950	2,425	2,625
56,725	61,580	68,375	81,625	105,525	138,600	139,425
2,535	3,395	4,035	5,325	7,625	10,600	9,600
59,260	64,975	72,410	86,950	113,150	149,200	149,025
13,135	14,855	17,325	24,150	32,350	50,775	50,900
325	325	325	450	750	925	1,375
3,625	1,800	750	1,100	1,550	1,025	775
275	500	600	350	600	700	525
1,575	1,200	1,750	2,625	3,250	4,600	5,350
2,200	2,500	2,300	2,000	2,400	2,650	2,200
625	775	950	975	1,300	1,425	1,400
325	445	475	550	700	900	1,025
22,085	22,400	24,475	32,200	42,900	63,000	63,550
1,375	1,645	1,975	2,600	3,850	5,700	4,500
23,460	24,045	26,450	34,800	46,750	68,700	68,050
1,550	2,900	3,200	4,300	5,900	5,575	5,375
150	125	150	225	300	200	450
135	350	135	125	150	175	200
325	375	400	175	250	625	950
75	125	125	75	100	475	500
175	175	165	150	175	275	275
45	75	65	150	200	250	300
2,455	4,125	4,240	5,200	7,075	7,575	8,050
250	450	500	700	825	925	750
2,705	4,575	4,740	5,900	7,900	8,500	8,800

SCHEDULE 4 CAPITAL AND EXPLORATION EXPENDITURES *(Continued)*

	1972	1973	1974	1975
	Million Dollars			
VENEZUELA				
Crude Oil and Natural Gas	150	200	290	240
Natural Gas Liquids Plants	5	5	15	10
Pipe Lines	5	5	10	0
Refineries	30	10	20	15
Chemical Plants	0	0	0	0
Marketing	0	0	0	10
Other	5	0	0	15
Total Capital Expenditures	195	220	335	290
Geological & Geophysical Expense and Lease Rentals	25	25	30	30
COMBINED	220	245	365	320
OTHER WESTERN HEMISPHERE				
Crude Oil and Natural Gas	550	575	925	950
Natural Gas Liquids Plants	0	50	50	75
Pipe Lines	175	75	260	625
Refineries	475	550	1,025	1,250
Chemical Plants	15	20	100	150
Marketing	125	100	125	150
Other	60	65	50	75
Total Capital Expenditures	1,400	1,435	2,535	3,275
Geological & Geophysical Expense and Lease Rentals	75	75	150	150
COMBINED	1,475	1,510	2,685	3,425
WESTERN EUROPE				
Crude Oil and Natural Gas	650	1,300	2,375	3,600
Natural Gas Liquids Plants	50	25	40	50
Pipe Lines	400	350	475	1,000
Refineries	1,500	1,550	2,250	2,350
Chemical Plants	800	600	850	1,100
Marketing	825	800	750	700
Other	225	200	180	250
Total Capital Expenditures	4,450	4,825	6,920	9,050
Geological & Geophysical Expense and Lease Rentals	125	175	225	300
COMBINED	4,575	5,000	7,145	9,350

1976	1977	1978	1979	1980	1981	1982
			Million Dollars			
250	375	700	800	1,000	1,450	2,300
40	5	5	15	25	200	50
15	10	20	25	75	25	25
10	40	175	425	675	600	600
0	0	0	10	25	50	50
5	20	25	25	75	75	75
15	30	60	25	50	50	100
335	480	985	1,325	1,925	2,450	3,200
10	50	60	200	400	450	525
345	530	1,045	1,525	2,325	2,900	3,375
1,175	1,100	1,900	2,650	3,650	5,250	6,100
75	200	250	325	325	700	600
750	425	1,550	1,200	825	725	650
1,100	1,050	1,000	1,175	1,050	1,175	900
475	950	1,075	1,375	1,225	1,150	1,200
150	175	225	250	250	300	350
100	200	175	125	200	225	225
3,825	4,100	6,175	7,100	7,525	9,525	10,025
125	150	200	300	450	600	750
3,950	4,250	6,375	7,400	7,975	10,125	10,775
4,200	5,275	5,975	7,200	10,500	10,300	10,500
50	225	200	350	400	400	350
1,100	875	950	700	550	750	625
1,450	2,000	2,500	2,525	2,950	3,075	2,600
1,200	1,300	1,500	1,600	1,800	1,250	1,550
725	875	1,100	1,400	2,125	1,850	1,525
225	325	250	300	300	325	300
8,950	10,875	12,475	14,075	18,625	17,950	17,450
325	450	475	550	750	1,025	1,275
9,275	11,325	12,950	14,625	19,375	18,975	18,725

SCHEDULE 4 CAPITAL AND EXPLORATION EXPENDITURES *(Continued)*

	1972	1973	1974	1975
	Million Dollars			
AFRICA				
Crude Oil and Natural Gas	500	500	750	825
Natural Gas Liquids Plants	100	125	140	175
Pipe Lines	90	55	50	250
Refineries	200	165	150	250
Chemical Plants	0	5	25	50
Marketing	100	100	75	100
Other	15	25	25	25
Total Capital Expenditures	1,005	975	1,215	1,675
Geological & Geophysical Expense and Lease Rentals	175	125	150	200
COMBINED	1,180	1,100	1,365	1,875
MIDDLE EAST				
Crude Oil and Natural Gas	500	850	975	1,000
Natural Gas Liquids Plants	10	5	25	25
Pipe Lines	140	130	120	350
Refineries	225	300	450	400
Chemical Plants	25	30	40	50
Marketing	25	25	25	25
Other	50	50	135	175
Total Capital Expenditures	975	1,390	1,770	2,025
Geological & Geophysical Expense and Lease Rentals	50	50	50	50
COMBINED	1,025	1,440	1,820	2,075
FAR EAST				
Crude Oil and Natural Gas	650	700	1,075	1,500
Natural Gas Liquids Plants	75	75	125	150
Pipe Lines	60	85	70	110
Refineries	1,300	950	1,650	1,950
Chemical Plants	50	80	125	225
Marketing	500	450	400	350
Other	65	70	80	75
Total Capital Expenditures	2,700	2,410	3,525	4,360
Geological & Geophysical Expense and Lease Rentals	200	225	225	200
COMBINED	2,900	2,635	3,750	4,560
FOREIGN FLAG TANKERS	3,650	6,450	8,700	9,015

1976	1977	1978	1979	1980	1981	1982
			Million Dollars			
1,000	950	1,275	1,650	2,300	3,450	3,750
200	600	900	1,000	800	1,200	1,025
525	525	625	550	575	1,250	900
375	900	1,175	800	750	1,125	750
150	300	400	500	575	725	700
125	175	200	225	225	275	325
50	100	75	75	50	75	125
2,425	3,550	4,650	4,800	5,275	8,100	7,575
175	300	375	350	500	800	675
2,600	3,850	5,025	5,150	5,775	8,900	8,250
1,375	1,925	1,550	1,700	2,450	3,500	3,675
675	1,400	1,500	1,650	2,500	3,700	2,225
1,250	2,150	1,400	1,550	2,200	2,500	975
925	1,250	2,050	2,100	2,350	3,125	3,600
150	900	1,000	1,200	1,750	1,350	1,975
25	50	50	100	125	200	275
275	125	100	125	150	250	225
4,675	7,800	7,650	8,425	11,525	14,625	12,950
75	125	150	175	200	250	325
4,750	7,925	7,800	8,600	11,725	14,875	13,275
1,175	1,300	1,750	2,050	3,150	5,100	6,200
400	900	700	550	475	650	800
175	525	350	525	550	625	525
1,150	1,475	1,625	1,950	2,200	2,850	3,450
250	300	250	475	425	750	700
350	425	525	625	775	800	875
75	125	175	425	300	350	325
3,575	5,050	5,375	6,600	7,875	11,125	12,875
200	225	300	450	650	850	800
3,775	5,275	5,675	7,050	8,525	11,975	13,675
8,400	3,200	2,350	1,900	2,800	4,250	3,750

SCHEDULE 5 EXPLORATION AND PRODUCTION EXPENDITURES – UNITED STATES – 1972 – 1982

(Excludes Natural Gas Liquids Plants)

	1972	1973	1974
	Million Dollars		
Lease Acquisitions – Onshore	200	500	700
Lease Acquisitions – Offshore	2,275	3,100	5,100
Total	2,475	3,600	5,800
Producing Wells	2,330	2,705	3,975
Dry Holes	935	985	1,450
Total Capitalized	5,740	7,290	11,225
Geological & Geophysical Expense	575	675	925
Lease Rentals	165	175	205
Total Exploration & Production Expenditures	6,480	8,140	12,355

	1975	1976	1977	1978
Lease Acquisitions – Onshore	500	600	650	700
Lease Acquisitions – Offshore	1,200	2,275	1,675	1,850
Total	1,700	2,875	2,325	2,550
Producing Wells	5,515	8,055	9,645	10,875
Dry Holes	1,840	2,205	2,885	3,900
Total Capitalized	9,055	13,135	14,855	17,325
Geological & Geophysical Expense	980	1,150	1,400	1,700
Lease Rentals	215	225	245	275
Total Exploration & Production Expenditures	10,250	14,510	16,500	19,300

	1979	1980	1981	1982
Lease Acquisitions – Onshore	800	1,025	1,650	1,150
Lease Acquisitions – Offshore	4,600	5,100	7,000	4,400
Total	5,400	6,125	8,650	5,550
Producing Wells	13,600	19,350	30,700	33,075
Dry Holes	5,150	6,875	11,425	12,275
Total Capitalized	24,150	32,350	50,775	50,900
Geological & Geophysical Expense	2,275	3,425	5,100	4,000
Lease Rentals	325	425	600	500
Total Exploration & Production Expenditures	26,750	36,200	56,475	55,400

SCHEDULE 6 CAPITAL EXPENDITURES CHASE GROUP VERSUS REST OF INDUSTRY

	1982	1981	1973	Distribution 1982	1981	1973
	(Billions of Dollars)			*(Percent of Total)*		
Chase Group*	59.0	58.5	13.5	42.3	42.2	45.0
Rest of Industry	80.4	80.1	16.5	57.7	57.8	55.0
Total	139.4	138.6	30.0	100.0	100.0	100.0

*The Chase Group refers to companies included in the Chase publication, ***Financial Analysis of a Group of Petroleum Companies.*** As explained on page 13, the numbers shown here for the Group refer to the aggregate value of all investment related to petroleum only, while the capital spending numbers included in ***Financial Analysis of a Group of Petroleum Companies*** cover spending for all activities.

GLOBAL SPECIALIZED INDUSTRIES

David F. Banks, *Senior Vice President*

GROUP STAFF CREDIT

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Harold Moore, *Vice President and Senior Associate General Counsel*

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Rantch Isquith, *Vice President*
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Richard M. Werbin, *Second Vice President*
Norma J. Anderson, *Assistant Treasurer*
Pamela S. Hannigan, *Assistant Treasurer*

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Margaret M. Cannella, *Vice President*
Ian Greenham, *Vice President*
Michael J. Higgins, *Vice President*
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John Sellers, *Vice President*
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Dwight F. Holloway,Jr., *Assistant Treasurer*
Christie L. Kramer, *Assistant Treasurer*
Katya L. Shirokow, *Assistant Treasurer*
Geoffrey S. Yeoh, *Assistant Treasurer*

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Alexandre Penna, *Second Vice President*

Technical Services

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Catherine Montgomery, *Vice President*
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Donald L. Shoop, *Vice President*
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William Roach, *Second Vice President*
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Robert Fisher, *Assistant Treasurer*
Harold Hecht, *Assistant Treasurer*

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Technical Services

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A.E. Buzz Jehle, *Vice President*
Valerie Jolliffe, *Industry Analyst*

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Richard M. Anooshian, *Second Vice President*
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Suzanne Matthews, *Second Vice President*
M. Terry Robinson, *Second Vice President*

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Guy Spaull, *Second Vice President*

Administrative Services

George Forshaw

Asian Petroleum Coordination

Arthur W. Kilfoil, *Vice President, Manager*

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1983

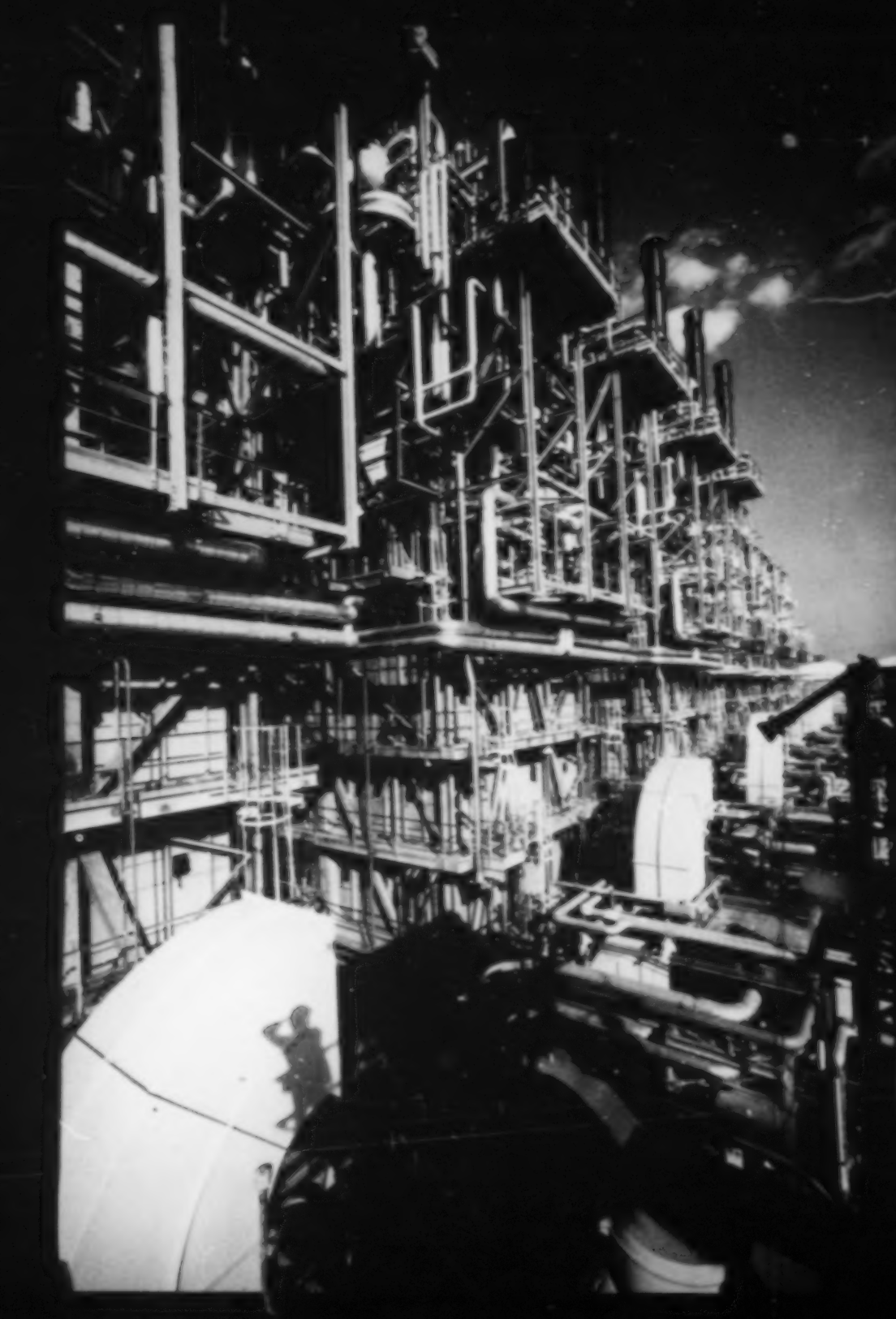
Capital Investments of the World Petroleum Industry

by

David J. Behling Jr., *Vice President*
Richard S. Dobias, *Second Vice President*
Norma J. Anderson, *Assistant Treasurer*

Global Petroleum — Energy Economics
April 1985

CHASE



FOREWORD

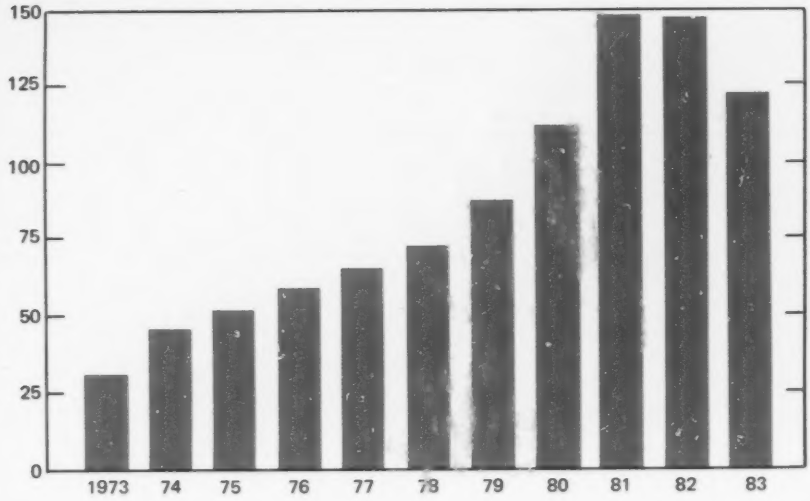
For many years the Energy Economics Group of The Chase Manhattan Bank has conducted a detailed study of the annual financial performance of the larger non-OPEC petroleum companies called the Chase Group. This study is published under the title *Financial Analysis of a Group of Petroleum Companies.* While the combined capital spending of the Chase Group constitutes a large proportion of the worldwide capital spending of the petroleum industry, for some time it has accounted for less than one-half of the total. This study extends the coverage of capital spending for the Chase Group, as presented in *Financial Analysis of a Group of Petroleum Companies*, to an estimate for the entire industry. Also, considerable detail is presented as to function and geographic location of capital spending.

Additional data have been obtained from surveys of a great many investor and government-owned operating entities. The sum of all the information gained has provided a base from which we have derived a reliable estimate of the worldwide capital investments of the petroleum industry for 1983. A corresponding estimate of worldwide capital investments for 1984 is contained in the Chase publication, *World Oil and Gas 1985: Prices, Production, Profits, Capital Spending, Financing,* along with forecasts for the 1985 to 2000 period.

CAPITAL AND EXPLORATION EXPENDITURES

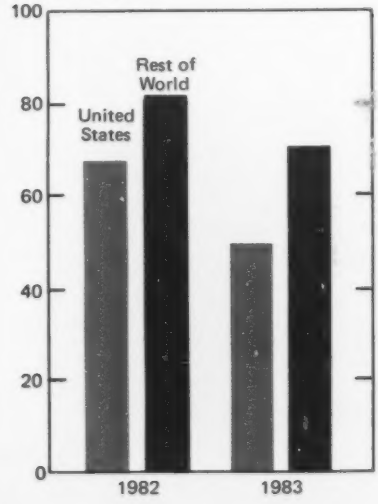
Worldwide

billions of dollars



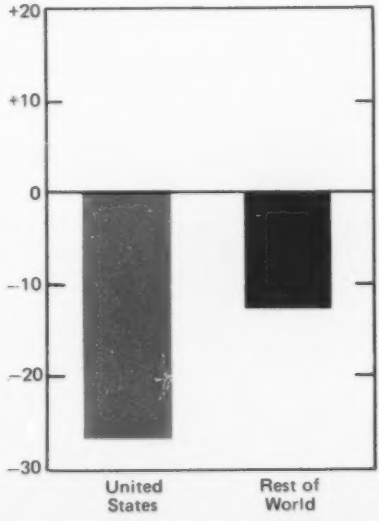
United States and Rest of World

billions of dollars



Change from 1982

percent



Highlights of
CAPITAL EXPENDITURES IN 1983

Worldwide Capital and Exploration Expenditures

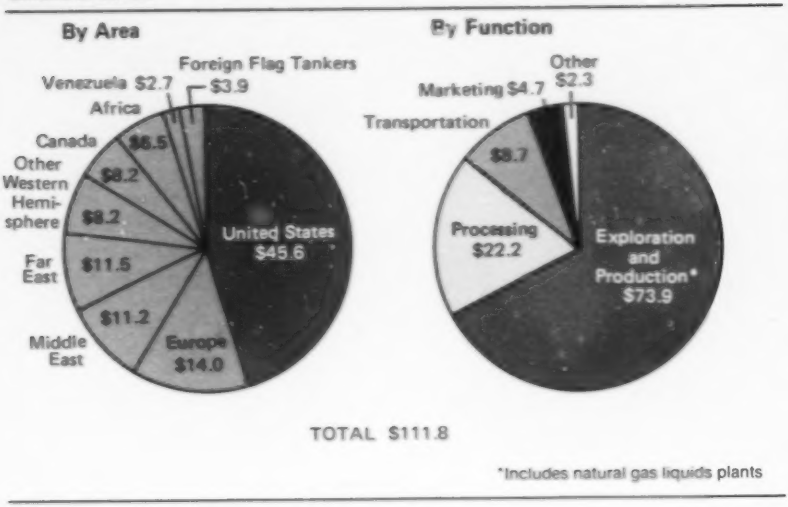
- After more than two decades of year-to-year increases in capital and exploration spending, the fractional drop recorded in 1982 turned to a substantial decline in 1983. Capital and exploration expenditures by the petroleum industry in the world, excluding Centrally Planned Economies, decreased to $120.2 billion in 1983, down from $149 billion the year before.

- A continuing reduction in demand for petroleum products since the peak levels of 1979, the first official OPEC price cut in March 1983 and the uncertainty regarding the future direction of petroleum prices, all had a strong dampening effect on investments. The huge expansion in capital outlays during the latter 1970's and early 1980's, when price expectations were considerably more optimistic, has led to a substantial excess of capacity in production, transportation, refining and marketing.

- Not including the non-capitalized exploration expenses of geological and geophysical costs and lease rentals normally charged against revenue, the petroleum industry's capital investments in 1983 totaled $111.8 billion, a reduction of $27.7 billion or 19.8 percent. A preliminary capital expenditures estimate for the year 1984, as well as projections of future investments, will appear in Chase Manhattan's study entitled *World Oil and Gas 1985,* to be released in the spring of 1985. This study will also contain projections of oil and gas demand, production and refining as well as revenue, profits and financing. The final 1984 petroleum industry capital expenditures estimate will be contained in the next issue of this publication, *Capital Investments of the World Petroleum Industry*, which is expected to be issued later in 1985.

WORLDWIDE CAPITAL EXPENDITURES – 1983

billions of dollars



TOTAL $111.8

*Includes natural gas liquids plants

Regional or Geographic Breakdown

- Capital expenditures were down everywhere except Canada. Substantial reductions in exploration and production expenditures dominated the spending cuts in most of the geographic areas.

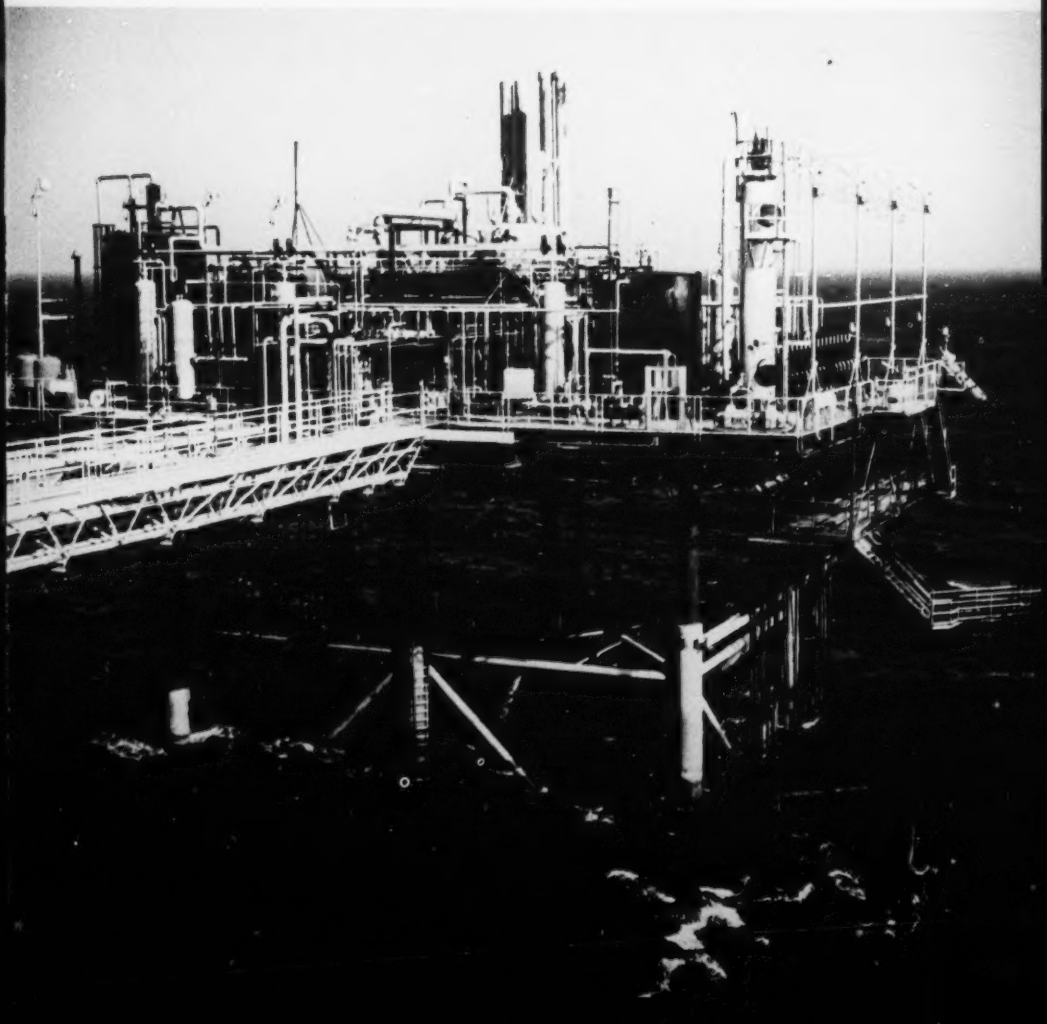
- In the United States, investments decreased 28 percent, from $63.6 billion in 1982 to $45.6 billion in 1983. This $18 billion reduction represents approximately two-thirds of the petroleum industry's overall investment reduction in 1983. The U.S. share of the total investment was reduced to about 41 percent, from nearly 46 percent the year before.

- Investments in Western Europe dropped by $3.5 billion to nearly $14 billion. Despite this 20 percent reduction, Europe remained the second largest investment area after the United States.

- Elsewhere, in both the Middle East and Other Western Hemisphere areas, investments declined $1.8 billion, reaching $11.2 billion and $8.3 billion respectively. In the Far East, investments fell by $1.4 billion to $11.5 billion.

Functional Breakdown

- By far, the largest decline in 1983 capital investments occurred in the exploration and production segment, which dropped 23 percent to $73.9 billion, from $95.7 billion a year earlier. This record reduction accounted for 79 percent of the overall fall in the industry's capital expenditures during 1983. On a worldwide basis, the total number of wells and footage drilled declined by approximately 13 percent and 15 percent respectively. Drilling rig costs dropped noticeably as the year progressed, due to weakening demand for rigs. In addition, the reduced drilling activity prompted a decline in the need for associated supplies and services, causing downward pressure on these drilling expenses as well. In 1983, exploration and production invest-

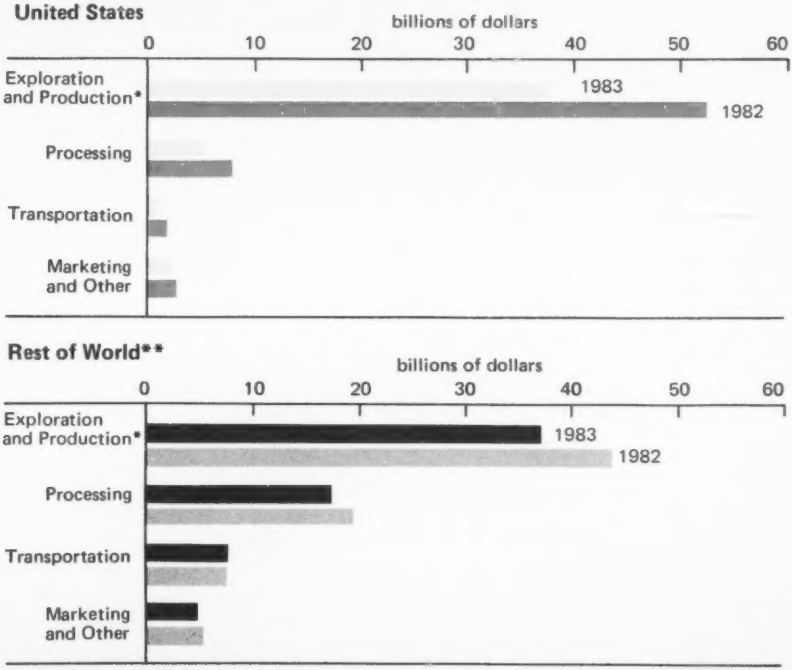


ments accounted for 66 percent of all capital investments, down from 69 percent in 1982.

- Downstream processing investments also declined sharply. Refinery investments decreased by $3.5 billion to $14.7 billion, as total refining capacity substantially exceeded the volume of demand for products. Except for some expansion in certain countries to meet local refining needs or to increase exports of refined products, refinery expenditures were devoted primarily to expanding the capability of existing facilities to produce lighter products or to process heavier, lower-quality crude oils. With similar conditions affecting petrochemicals, the outlays for chemical plants decreased to $7.5 billion, $1.4 billion less than in 1982.

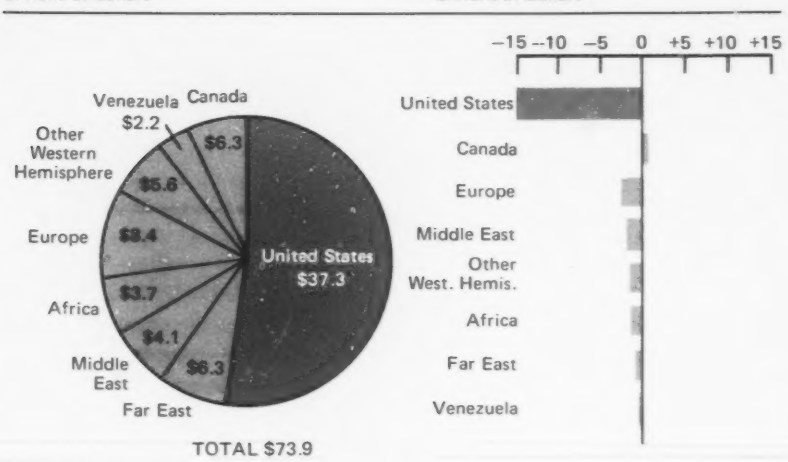
- Investments for transportation purposes in 1983 dropped only slightly, by $225 million, to $8.7 billion. This compares with a $3.1 billion decline in 1982. Tanker outlays of $4.3 bil-

WORLDWIDE CAPITAL EXPENDITURES BREAKDOWN BY FUNCTION – 1983 VS. 1982



*Includes natural gas liquids plants
**Excludes centrally planned economies countries

CAPITAL EXPENDITURES – EXPLORATION AND PRODUCTION



lion were nearly unchanged, as the decline in tanker tonnage delivered was almost completely offset by an increase in construction costs. Pipeline expenditures declined modestly, by only $250 million, to $4.4 billion. Few major new projects were initiated.

- The lower consumption of petroleum products caused further retrenchment in marketing investments. A number of companies completely withdrew from marketing in various areas. Marketing investments dropped by $425 million to $4.7 billion, the lowest level in 3 years.

Chase Group Versus Rest of Industry

- The group of companies whose combined financial performance is reported annually in Chase's publication, *Financial Analysis of a Group of Petroleum Companies*, accounted for 40 percent of the petroleum industry's worldwide capital investments in 1983. In 1974, the Chase Group's capital expenditures represented nearly 48 percent of the total, while in 1982 they equaled 41 percent.

APPENDIX

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Photographs used in this report were furnished through the courtesy of Exxon Corporation, Mobil Oil Corporation and Texaco Inc.

Definitions of Investment Categories

This annual report is intended to cover all capital investments made with regard to crude oil and natural gas production and use. Thus, investments by the petroleum industry for non-petroleum purposes such as coal, nuclear, other minerals, or any type of other business activity are not included. Also excluded are the funds expended by one petroleum entity for the acquisition of already existing petroleum assets from another entity, since the initial expenditures for such assets have been recorded in earlier year investment totals.

The petroleum industry is defined to include five primary functional categories: exploration and production, transportation, processing, marketing and other (primarily general administration). We have made some further distinctions by category. Their application in this study is indicated here.

Exploration and Production, for purposes of this report, represent the search for and development and production of crude oil and natural gas. It also includes natural gas liquids and liquefaction plants, shown as natural gas liquids plants in the accompanying tables.

Transportation is separated into two categories: pipelines and tankers. Pipelines include crude oil, natural gas and refined liquid product lines. However, not included in pipelines are natural gas transmission pipelines, since they usually come under some form of government rate regulation and are, therefore, more appropriately considered utility operations. Tankers include all vessels used in the transportation of crude oil, refined products, LPG and LNG, regardless of ownership of the vessels.

Processing encompasses the refining of products from crude oil and includes related storage, terminals and chemical plants. The latter covers petrochemicals, plastics and fertilizers. Only the chemical activities of the petroleum companies are included.

Marketing is comprised of all service stations, bulk plants, terminals and trucks or other transportation equipment used to deliver products to a marketing facility.

The category **Other** primarily consists of administrative and miscellaneous transportation facilities not included in the pipeline, tanker and marketing categories.

In addition, after summarizing the capitalized investments, we report the cost of geological and geophysical expenses, as well as lease rentals. These non-capitalized costs are exploration expenses normally charged against revenue at the time they are incurred.

Chase also publishes a report, entitled *Financial Analysis of a Group of Petroleum Companies*, which contains capital spending data for a number of the larger non-OPEC petroleum companies, known as the Chase Group. The capital expenditure data reported in that study include all capital investments made by those companies, including non-petroleum capital expenditures. Thus, investments for coal, nuclear, other minerals, as well as any type of other business activity, are included.

The Chase publication, *World Oil and Gas 1985: Prices, Production, Profits, Capital Spending, Financing*, contains preliminary estimates of capital expenditures directly comparable to the historical data in this publication, although in a more aggregated format. *World Oil and Gas* 1985 contains forecasts as well.

SCHEDULE 1 CAPITAL AND EXPLORATION EXPENDITURES Year 1983

	United States	Canada	Venezuela
	Million Dollars		
Crude Oil and Natural Gas	36,625	6,100	2,050
Natural Gas Liquids Plants	650	200	150
Total Exploration and Production	37,275	6,300	2,200
Pipe Lines	625	225	25
Tankers	375	0	0
Refineries	3,750	875	175
Chemical Plants	1,350	400	50
Marketing	1,375	275	75
Other	850	175	150
Total Capital Expenditures	45,600	8,250	2,675
Geological & Geophysical Expense and Lease Rentals	4,250	625	300
CAPITAL & EXPLORATION EXPENDITURES	49,850	8,875	2,975

SCHEDULE 2 GROSS INVESTMENT IN FIXED ASSETS December 31, 1983

Crude Oil and Natural Gas	235,250	37,850	12,825
Natural Gas Liquids Plants	8,450	2,950	725
Total Exploration and Production	243,700	40,800	13,550
Pipe Lines	22,550	2,675	690
Tankers	5,150	0	0
Refineries	38,775	6,775	3,375
Chemical Plants	26,150	2,250	185
Marketing	18,075	3,400	425
Other	7,450	1,500	500
TOTAL GROSS INVESTMENT	361,850	57,400	18,725

SCHEDULE 3 NET INVESTMENT IN FIXED ASSETS December 31, 1983

Crude Oil and Natural Gas	170,735	32,365	7,320
Natural Gas Liquids Plants	4,575	1,945	470
Total Exploration and Production	175,310	34,310	7,790
Pipe Lines	14,195	1,385	160
Tankers	3,090	0	0
Refineries	21,815	4,065	2,160
Chemical Plants	15,845	1,745	170
Marketing	7,790	1,755	300
Other	4,500	1,255	435
TOTAL NET INVESTMENT	242,545	44,515	11,015

Other Western Hemisphere	Western Europe	Africa	Middle East	Far East	Unallocated	Free World
			Million Dollars			
5,025	8,100	2,775	2,600	5,250	0	68,525
525	300	900	1,525	1,075	0	5,325
5,550	8,400	3,675	4,125	6,325	0	73,850
400	850	1,100	725	475	0	4,425
0	0	0	0	0	3,925	4,300
775	2,050	625	3,300	3,125	0	14,675
1,050	1,025	600	2,450	575	0	7,500
275	1,325	350	325	675	0	4,675
200	300	150	225	300	0	2,350
8,250	13,950	6,500	11,150	11,475	3,925	111,775
550	1,100	525	375	700	0	8,425
8,800	15,050	7,025	11,525	12,175	3,925	120,200
30,250	64,600	17,825	23,575	24,425	0	446,600
3,275	2,650	7,475	15,175	6,125	0	46,825
33,525	67,250	25,300	38,750	30,550	0	493,425
9,225	9,775	7,800	14,675	4,325	0	71,715
0	0	0	0	0	57,675	62,825
14,800	34,700	7,575	19,975	29,375	0	156,350
9,650	17,075	3,875	10,925	5,125	0	75,235
3,725	21,050	3,275	1,600	9,275	0	60,825
1,900	3,450	850	2,225	2,450	0	20,325
72,825	153,300	48,675	88,150	81,100	57,675	939,700
22,325	55,930	14,105	14,425	20,590	0	337,795
2,655	2,090	5,975	12,915	4,995	0	35,620
24,980	58,020	20,080	27,340	25,585	0	373,415
6,065	6,560	5,585	10,495	3,330	0	47,775
0	0	0	0	0	45,645	48,735
9,105	18,195	5,535	16,340	18,520	0	95,735
7,410	10,675	3,405	9,575	3,560	0	52,385
1,195	7,200	1,265	855	4,150	0	24,510
1,435	2,625	630	1,435	1,945	0	14,260
50,190	103,275	36,500	66,040	57,090	45,645	656,815

SCHEDULE 4 CAPITAL AND EXPLORATION EXPENDITURES

	1973	1974	1975	1976
	Million Dollars			
WORLD				
Crude Oil and Natural Gas	12,415	18,765	18,295	23,860
Natural Gas Liquids Plants	510	770	960	1,915
Pipe Lines	1,230	2,460	5,995	7,575
Tankers	6,550	8,900	9,240	8,675
Refineries	4,865	7,720	8,725	6,910
Chemical Plants	1,175	1,995	3,145	4,500
Marketing	2,480	2,215	2,160	2,180
Other	770	875	1,105	1,110
Total Capital Expenditures	29,995	43,700	49,625	56,725
Geological & Geophysical Expense and Lease Rentals	1,700	2,185	2,325	2,535
COMBINED	31,695	45,885	51,950	59,260
UNITED STATES				
Crude Oil and Natural Gas	7,290	11,225	9,055	13,135
Natural Gas Liquids Plants	150	225	325	325
Pipe Lines	450	1,400	3,500	3,625
Tankers	100	200	225	275
Refineries	1,050	1,775	2,100	1,575
Chemical Plants	425	825	1,500	2,200
Marketing	850	650	650	625
Other	325	325	370	325
Total Capital Expenditures	10,640	16,625	17,725	22,085
Geological & Geophysical Expense and Lease Rentals	850	1,130	1,195	1,375
COMBINED	11,490	17,755	18,920	23,460
CANADA				
Crude Oil and Natural Gas	1,000	1,150	1,125	1,550
Natural Gas Liquids Plants	75	150	150	150
Pipe Lines	80	75	160	135
Refineries	290	400	410	325
Chemical Plants	15	30	70	75
Marketing	155	190	175	175
Other	35	80	120	45
Total Capital Expenditures	1,650	2,075	2,210	2,455
Geological & Geophysical Expense and Lease Rentals	175	225	200	250
COMBINED	1,825	2,300	2,410	2,705

1977	1978	1979	1980	1981	1982	1983
			Million Dollars			
28,680	33,675	44,500	61,300	85,400	88,800	68,525
3,780	4,030	4,565	5,575	7,975	6,875	5,325
6,660	5,780	5,775	6,475	7,075	4,675	4,425
3,700	2,950	2,250	3,400	4,950	4,275	4,300
8,290	10,675	11,775	13,475	17,175	18,200	14,675
6,375	6,650	7,235	8,300	8,400	8,875	7,500
2,670	3,240	3,750	5,050	5,200	5,100	4,675
1,425	1,375	1,775	1,950	2,425	2,625	2,350
61,580	68,375	81,625	105,525	138,600	139,425	111,775
3,395	4,035	5,325	7,625	10,600	9,600	8,425
64,975	72,410	86,950	113,150	149,200	149,025	120,200
14,855	17,325	24,150	32,350	50,775	50,900	36,625
325	325	450	750	925	1,375	650
1,800	750	1,100	1,550	1,025	775	625
500	600	350	600	700	525	375
1,200	1,750	2,625	3,250	4,600	5,350	3,750
2,500	2,300	2,000	2,400	2,650	2,200	1,350
775	950	975	1,300	1,425	1,400	1,375
445	475	550	700	900	1,025	850
22,400	24,475	32,200	42,900	63,000	63,550	45,600
1,645	1,975	2,600	3,850	5,700	4,500	4,250
24,045	26,450	34,800	46,750	68,700	68,050	49,850
2,900	3,200	4,300	5,900	5,575	5,375	6,100
125	150	225	300	200	450	200
350	135	125	150	175	200	225
375	400	175	250	625	950	875
125	125	75	100	475	500	400
175	165	150	175	275	275	275
75	65	150	200	250	300	175
4,125	4,240	5,200	7,075	7,575	8,050	8,250
450	500	700	825	925	750	625
4,575	4,740	5,900	7,900	8,500	8,800	8,875

SCHEDULE 4 CAPITAL AND EXPLORATION EXPENDITURES *(Continued)*

	1973	1974	1975	1976
	Million Dollars			
VENEZUELA				
Crude Oil and Natural Gas	200	290	240	250
Natural Gas Liquids Plants	5	15	10	40
Pipe Lines	5	10	0	15
Refineries	10	20	15	10
Chemical Plants	0	0	0	0
Marketing	0	0	10	5
Other	0	0	15	15
Total Capital Expenditures	220	335	290	335
Geological & Geophysical Expense and Lease Rentals	25	30	30	10
COMBINED	245	365	320	345
OTHER WESTERN HEMISPHERE				
Crude Oil and Natural Gas	575	925	950	1,175
Natural Gas Liquids Plants	50	50	75	75
Pipe Lines	75	260	625	750
Refineries	550	1,025	1,250	1,100
Chemical Plants	20	100	150	475
Marketing	100	125	150	150
Other	65	50	75	100
Total Capital Expenditures	1,435	2,535	3,275	3,825
Geological & Geophysical Expense and Lease Rentals	75	150	150	125
COMBINED	1,510	2,685	3,425	3,950
WESTERN EUROPE				
Crude Oil and Natural Gas	1,300	2,375	3,600	4,200
Natural Gas Liquids Plants	25	40	50	50
Pipe Lines	350	475	1,000	1,100
Refineries	1,550	2,250	2,350	1,450
Chemical Plants	600	850	1,100	1,200
Marketing	800	750	700	725
Other	200	180	250	225
Total Capital Expenditures	4,825	6,920	9,050	8,950
Geological & Geophysical Expense and Lease Rentals	175	225	300	325
COMBINED	5,000	7,145	9,350	9,275

1977	1978	1979	1980	1981	1982	1983
			Million Dollars			
375	700	800	1,000	1,450	2,300	2,050
5	5	15	25	200	50	150
10	20	25	75	25	25	25
40	175	425	675	600	600	175
0	0	10	25	50	50	50
20	25	25	75	75	75	75
30	60	25	50	50	100	150
480	985	1,325	1,925	2,450	3,200	2,675
50	60	200	400	450	525	300
530	1,045	1,525	2,325	2,900	3,725	2,975
1,100	1,900	2,650	3,650	5,250	6,100	5,025
200	250	325	325	700	600	525
425	1,550	1,200	825	725	650	400
1,050	1,000	1,175	1,050	1,175	900	775
950	1,075	1,375	1,225	1,150	1,200	1,050
175	225	250	250	300	350	275
200	175	125	200	225	225	200
4,100	6,175	7,100	7,525	9,525	10,025	8,250
150	200	300	450	600	750	550
4,250	6,375	7,400	7,975	10,125	10,775	8,800
5,275	5,975	7,200	10,500	10,300	10,500	8,100
225	200	350	400	400	350	300
875	950	700	550	750	625	850
2,000	2,500	2,525	2,950	3,075	2,600	2,050
1,300	1,500	1,600	1,800	1,250	1,550	1,025
875	1,100	1,400	2,125	1,850	1,525	1,325
325	250	300	300	325	300	300
10,875	12,475	14,075	18,625	17,950	17,450	13,950
450	475	550	750	1,025	1,275	1,100
11,325	12,950	14,625	19,375	18,975	18,725	15,050

SCHEDULE 4 CAPITAL AND EXPLORATION EXPENDITURES *(Continued)*

	1973	1974	1975	1976
	Million Dollars			
AFRICA				
Crude Oil and Natural Gas	500	750	825	1,000
Natural Gas Liquids Plants	125	140	175	200
Pipe Lines	55	50	250	525
Refineries	165	150	250	375
Chemical Plants	5	25	50	150
Marketing	100	75	100	125
Other	25	25	25	50
Total Capital Expenditures	975	1,215	1,675	2,425
Geological & Geophysical Expense and Lease Rentals	125	150	200	175
COMBINED	1,100	1,365	1,875	2,600
MIDDLE EAST				
Crude Oil and Natural Gas	850	975	1,000	1,375
Natural Gas Liquids Plants	5	25	25	675
Pipe Lines	130	120	350	1,250
Refineries	300	450	400	925
Chemical Plants	30	40	50	150
Marketing	25	25	25	25
Other	50	135	175	275
Total Capital Expenditures	1,390	1,770	2,025	4,675
Geological & Geophysical Expense and Lease Rentals	50	50	50	75
COMBINED	1,440	1,820	2,075	4,750
FAR EAST				
Crude Oil and Natural Gas	700	1,075	1,500	1,175
Natural Gas Liquids Plants	75	125	150	400
Pipe Lines	85	70	110	175
Refineries	950	1,650	1,950	1,150
Chemical Plants	80	125	225	250
Marketing	450	400	350	350
Other	70	80	75	75
Total Capital Expenditures	2,410	3,525	4,360	3,575
Geological & Geophysical Expense and Lease Rentals	225	225	200	200
COMBINED	2,635	3,750	4,560	3,775
FOREIGN FLAG TANKERS	6,450	8,700	9,015	8,400

1977	1978	1979	1980	1981	1982	1983
			Million Dollars			
950	1,275	1,650	2,300	3,450	3,750	2,775
600	900	1,000	800	1,200	1,025	900
525	625	550	575	1,250	900	1,100
900	1,175	800	750	1,125	750	625
300	400	500	575	725	700	600
175	200	225	225	275	325	350
100	75	75	50	75	125	150
3,550	4,650	4,800	5,275	8,100	7,575	6,500
300	375	350	500	800	675	525
3,850	5,025	5,150	5,775	8,900	8,250	7,025
1,925	1,550	1,700	2,450	3,500	3,675	2,600
1,400	1,500	1,650	2,500	3,700	2,225	1,525
2,150	1,400	1,550	2,200	2,500	975	725
1,250	2,050	2,100	2,350	3,125	3,600	3,300
900	1,000	1,200	1,750	1,350	1,975	2,450
50	50	100	125	200	275	325
125	100	125	150	250	225	225
7,800	7,650	8,425	11,525	14,625	12,950	11,150
125	150	175	200	250	325	375
7,925	7,800	8,600	11,725	14,875	13,275	11,525
1,300	1,750	2,050	3,150	5,100	6,200	5,250
900	700	550	475	650	800	1,075
525	350	525	550	625	525	475
1,475	1,625	1,950	2,200	2,850	3,450	3,125
300	250	475	425	750	700	575
425	525	625	775	800	875	675
125	175	425	300	350	325	300
5,050	5,375	6,600	7,875	11,125	12,875	11,475
225	300	450	650	850	800	700
5,275	5,675	7,050	8,525	11,975	13,675	12,175
3,200	2,350	1,900	2,800	4,250	3,750	3,925

SCHEDULE 5 EXPLORATION AND PRODUCTION EXPENDITURES – UNITED STATES – 1973 – 1983

(Excludes Natural Gas Liquids Plants)

	1973	1974	1975
	Million Dollars		
Lease Acquisitions – Onshore	500	700	500
Lease Acquisitions – Offshore	3,100	5,100	1,200
Total	3,600	5,800	1,700
Producing Wells	2,705	3,975	5,515
Dry Holes	985	1,450	1,840
Total Capitalized	7,290	11,225	9,055
Geological & Geophysical Expense	675	925	980
Lease Rentals	175	205	215
Total Exploration & Production Expenditures	8,140	12,355	10,250

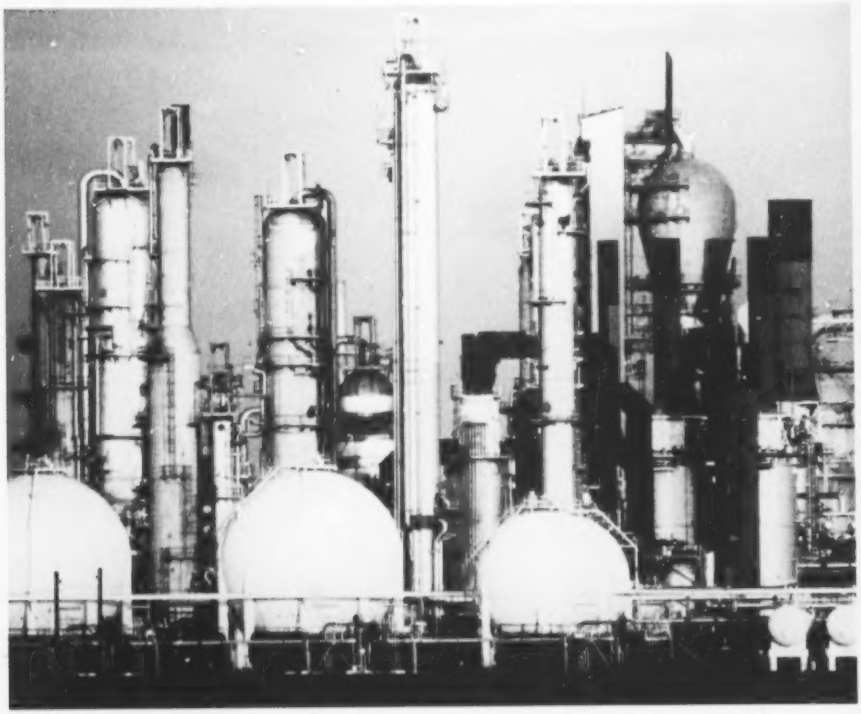
	1976	1977	1978	1979
Lease Acquisitions – Onshore	600	650	700	800
Lease Acquisitions – Offshore	2,275	1,675	1,850	4,600
Total	2,875	2,325	2,550	5,400
Producing Wells	8,055	9,645	10,875	13,600
Dry Holes	2,205	2,885	3,900	5,150
Total Capitalized	13,135	14,855	17,325	24,150
Geological & Geophysical Expense	1,150	1,400	1,700	2,275
Lease Rentals	225	245	275	325
Total Exploration & Production Expenditures	14,510	16,500	19,300	26,750

	1980	1981	1982	1983
Lease Acquisitions – Onshore	1,025	1,650	1,150	900
Lease Acquisitions – Offshore	5,100	7,000	4,400	6,050
Total	6,125	8,650	5,550	6,950
Producing Wells	19,350	30,700	33,075	21,950
Dry Holes	6,875	11,425	12,275	7,725
Total Capitalized	32,350	50,775	50,900	36,625
Geological & Geophysical Expense	3,425	5,100	4,000	3,800
Lease Rentals	425	600	500	450
Total Exploration & Production Expenditures	36,200	56,475	55,400	40,875

SCHEDULE 6 CAPITAL EXPENDITURES CHASE GROUP VERSUS REST OF INDUSTRY

	1983	1982	1974	Distribution 1983	Distribution 1982	Distribution 1974
	(Billion Dollars)			*(Percent of Total)*		
Chase Group*	45.0	57.2	20.8	40.3	41.0	47.6
Rest of Industry	66.8	82.2	22.9	59.7	59.0	52.4
Total	111.8	139.4	43.7	100.0	100.0	100.0

*The Chase Group refers to companies included in the Chase publication, ***Financial Analysis of a Group of Petroleum Companies.*** As explained on page 13, the numbers shown here for the Group refer to the aggregate value of all investment related to petroleum only, while the capital spending numbers included in *Financial Analysis of a Group of Petroleum Companies* cover spending for all activities.



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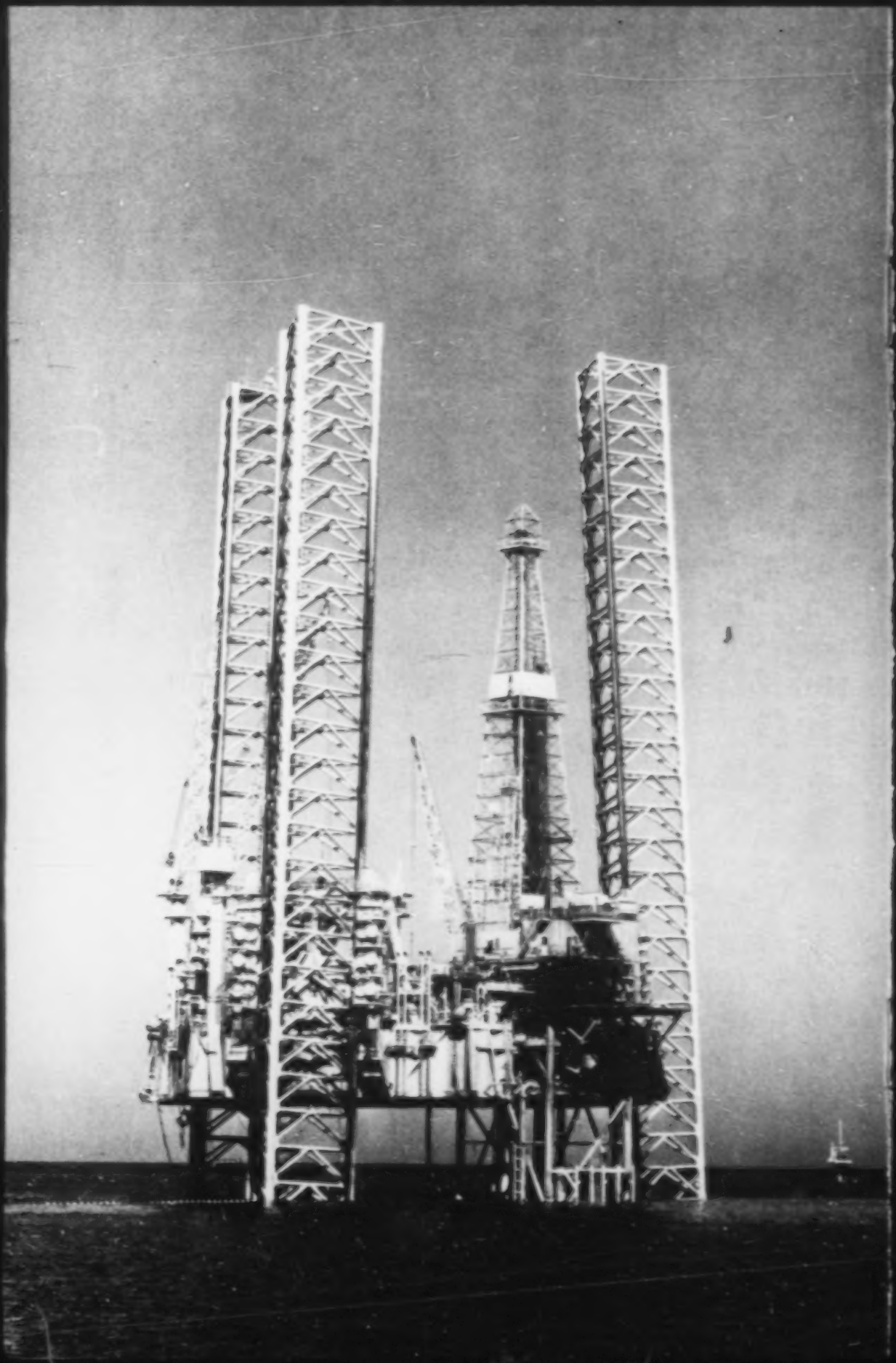
1984
Capital Investments of the World Petroleum Industry

by

David J. Behling Jr., *Vice President*
Richard S. Dobias, *Second Vice President*
Norma J. Anderson, *Assistant Treasurer*

Global Petroleum Division – Energy Economics Group
September 1985

CHASE



FOREWORD

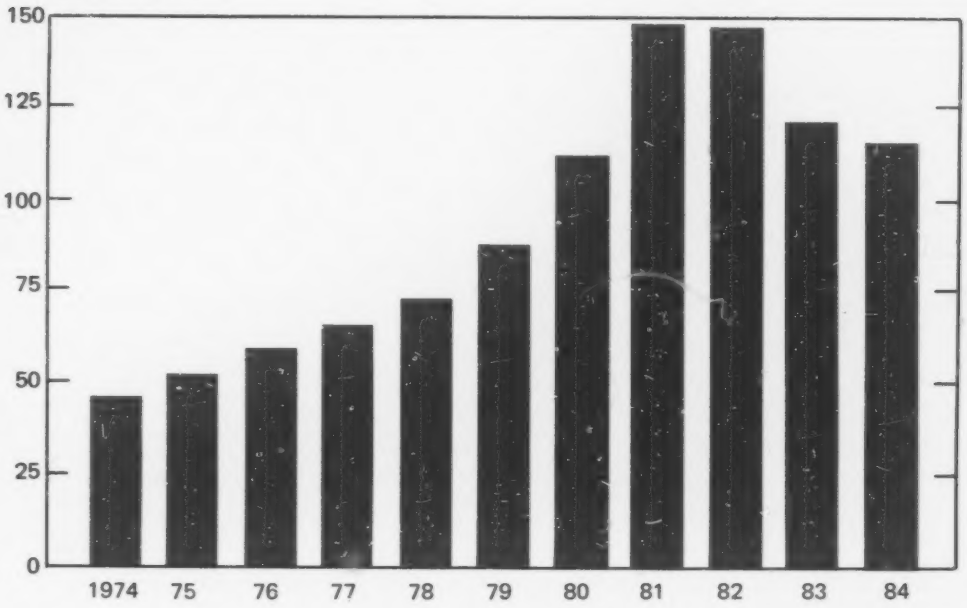
For many years, the Energy Economics Group of The Chase Manhattan Bank has conducted a detailed study of the annual financial performance of the larger non-OPEC petroleum companies called the Chase Group. This study is published under the title *Financial Analysis of a Group of Petroleum Companies.* While the combined capital spending of the Chase Group constitutes a large proportion of the worldwide capital spending of the petroleum industry, for some time it has accounted for less than one half of the total. This study extends the coverage of capital spending for the Chase Group, as presented in *Financial Analysis of a Group of Petroleum Companies,* to an estimate for the entire industry. Also, considerable detail is presented as to the type and geographic location of the capital spending. Coverage is provided for the entire world, excluding centrally planned economies.

Additional data have been obtained from confidential surveys of a great many investor and government-owned operating entities, and also from the general trade literature. This year, we would especially like to thank the editors of *World Oil* for providing us with timely data for 1984. The sum of all this information gave us a base from which we have derived what we believe to be a reliable estimate of the worldwide capital investments of the petroleum industry for 1984. A corresponding projection of worldwide capital investments for the 1985 to 2000 period is contained in the Chase publication, *World Oil and Gas 1985: Prices, Production, Profits, Capital Spending, and Financing.*

CAPITAL AND EXPLORATION EXPENDITURES

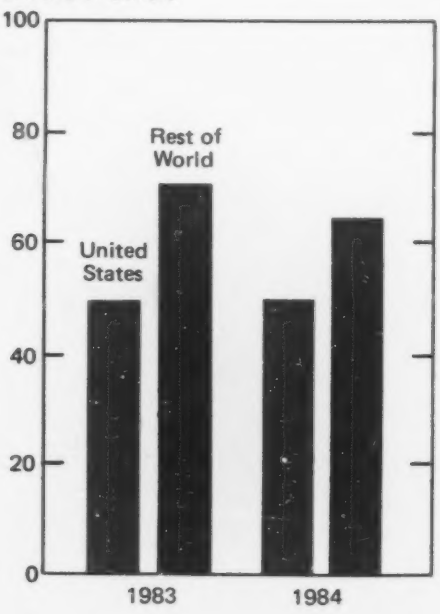
Worldwide

billions of dollars



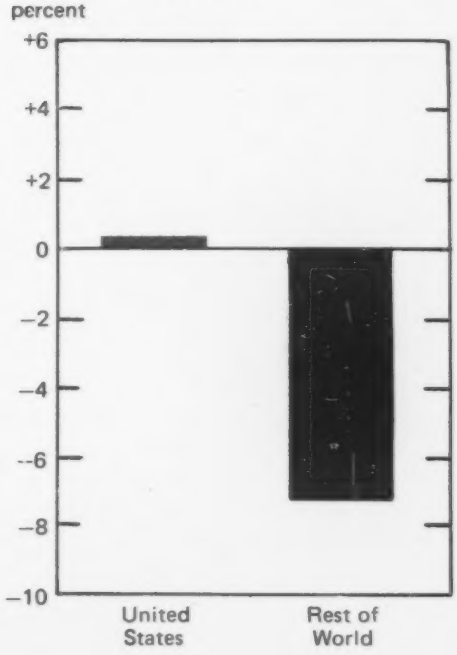
United States and Rest of World

billions of dollars



Change from 1983

percent



Highlights of
CAPITAL EXPENDITURES IN 1984

Worldwide Capital And Exploration Expenditures

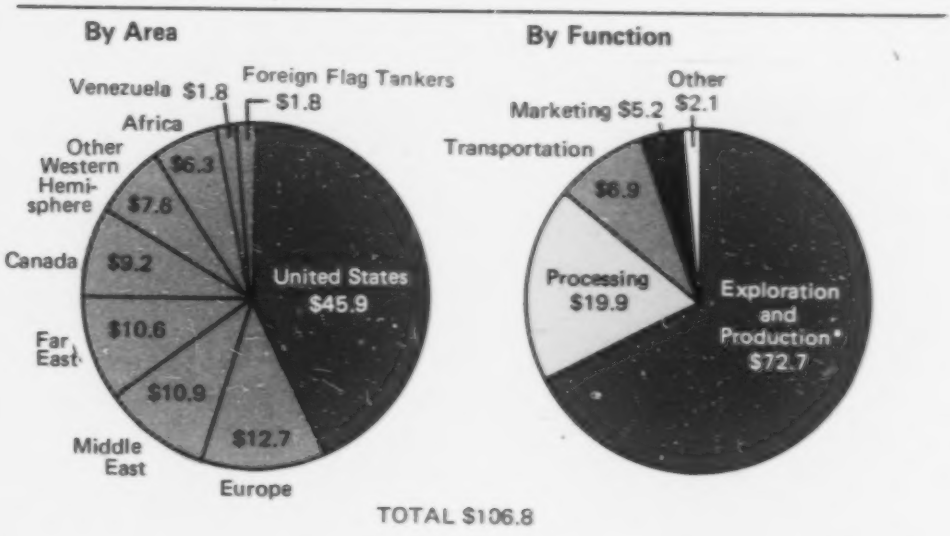
- The capital and exploration expenditures of the world petroleum industry continued to decline in 1984. Capital expenditures, together with non-capitalized geological, geophysical and lease rental costs, dropped $5.1 billion in 1984 to $115.2 billion. This decline, however, was not nearly as large as the $28.8 billion reduction which occurred in 1983.

- Excluding the non-capitalized items, the petroleum industry's capital investments amounted to $106.8 billion in 1984, down $5 billion from $111.8 billion in 1983.

- Several factors contributed to the lower amount of capital spending, the most important being lower crude oil and product prices and reduced refining profit margins. These served to reduce cash flow for most industry participants and also contributed to the development of more bearish expectations concerning future petroleum prices and profitability. An offsetting positive factor was the considerable amount of rationalization of outdated downstream capacity that occurred in 1984 and a small recovery in the use of the capacity remaining in place. Still, considerable excess capacity persisted in all segments of the industry at year-end 1984.

WORLDWIDE CAPITAL EXPENDITURES – 1984

billions of dollars



Regional Or Geographic Breakdown

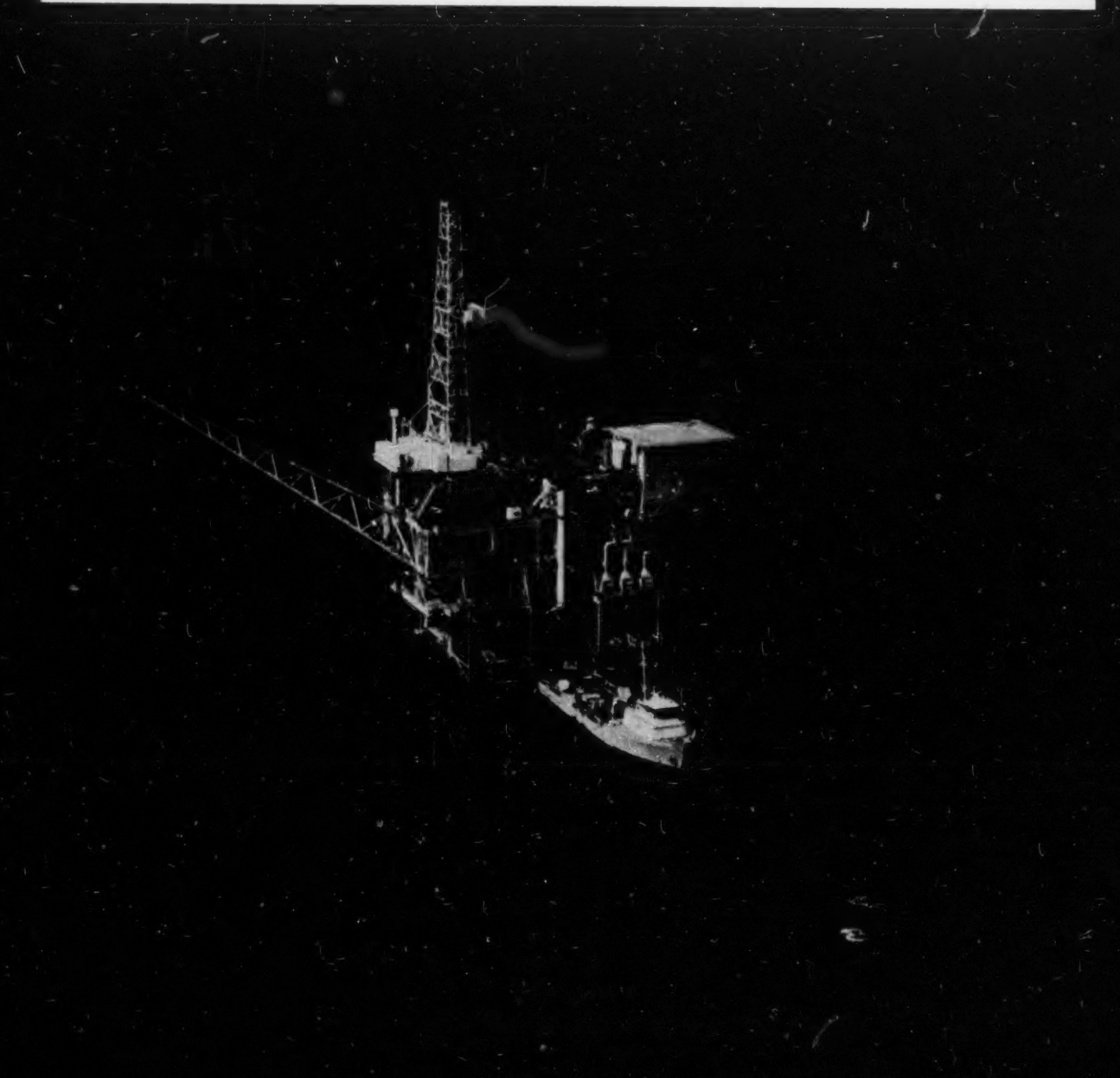
- Capital expenditures declined in all regions of the world in 1984, except in the United States and Canada. In the United States, both petroleum product demand and revenue rose sharply, while Canadian policy toward petroleum pricing and capital spending became much more favorable to the industry.

- In Canada, the total capital expenditure jumped $1.0 billion to $9.2 billion, an increase of 12 percent. Spending for exploration and production rose by over $1.5 billion, while processing expenditures declined by more than $0.5 billion.

- In the United States, capital investments in all segments of the industry totaled $45.9 billion in 1984, up a fractional $0.3 billion from 1983. Increases in spending for exploration and production, pipelines and marketing totaling $1.4 billion were offset by almost equivalent reductions in outlays for refineries and chemical plants. As a proportion of the worldwide total, investments in the U.S. represented 43 percent, up two percentage points over 1983, but still lower than the 46 percent of 1982.

- Expenditures in Western Europe, at $12.7 billion in 1984, remained second in size to the United States. However, capital expenditures declined here more than in any other region, by $1.2 billion. Reductions occurred in nearly all segments of the industry.

- Elsewhere, capital expenditures also declined. The major contributing factors everywhere, except in the United States, Canada and the Far East, were decreases in exploration and production expenditures related to lesser amounts of drilling and lower drilling costs. In the Far East, however, a principal cause was a decline in refining expenditures.

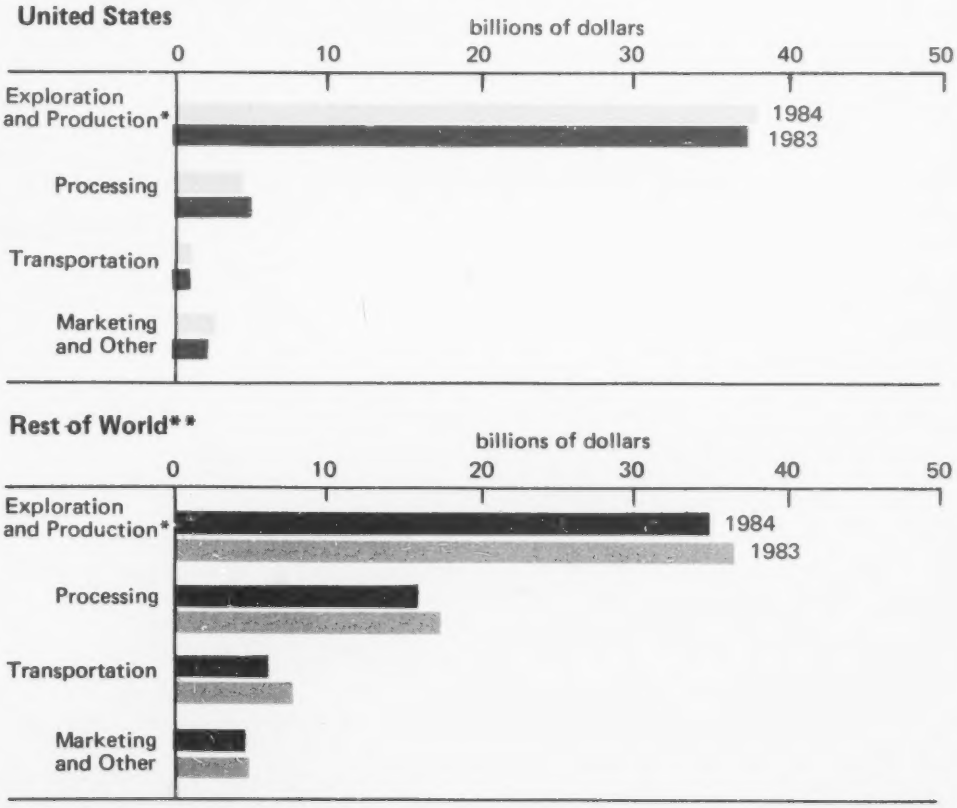


Functional Breakdown

- Capital invested for exploration and production purposes decreased slightly by $1.2 billion in 1984 to $72.7 billion. The entire decline was due to lower costs of finding and developing reserves. The declines in these costs more than offset a nine percent increase in the number of wells drilled worldwide, and a 17 percent increase in the amount of footage drilled worldwide. Most of the increased drilling occurred in the United States and Canada.

- Capital expended for exploration, development and production in 1984 declined by a much smaller percentage than downstream expenditures, so that the share of upstream expenditures in total capital expenditures rose from 66 percent in 1983 to 68 percent in 1984.

WORLDWIDE CAPITAL EXPENDITURES
BREAKDOWN BY FUNCTION – 1984 VS. 1983

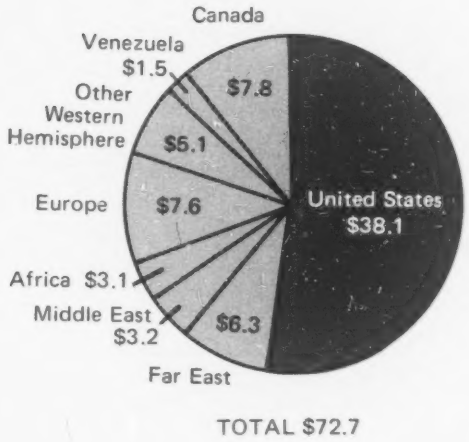


*Includes natural gas liquids plants
**Excludes centrally planned economies

CAPITAL EXPENDITURES – EXPLORATION AND PRODUCTION

Year 1984

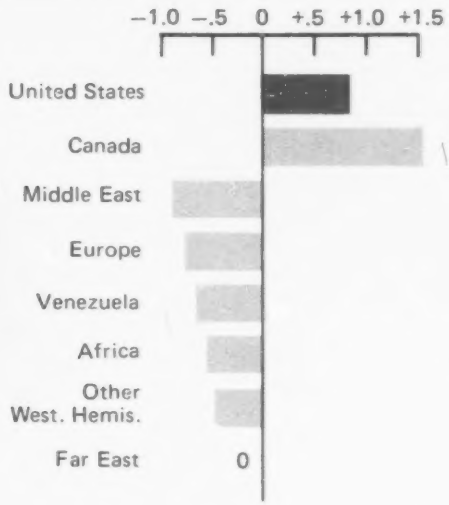
billions of dollars



TOTAL $72.7

Change from 1983

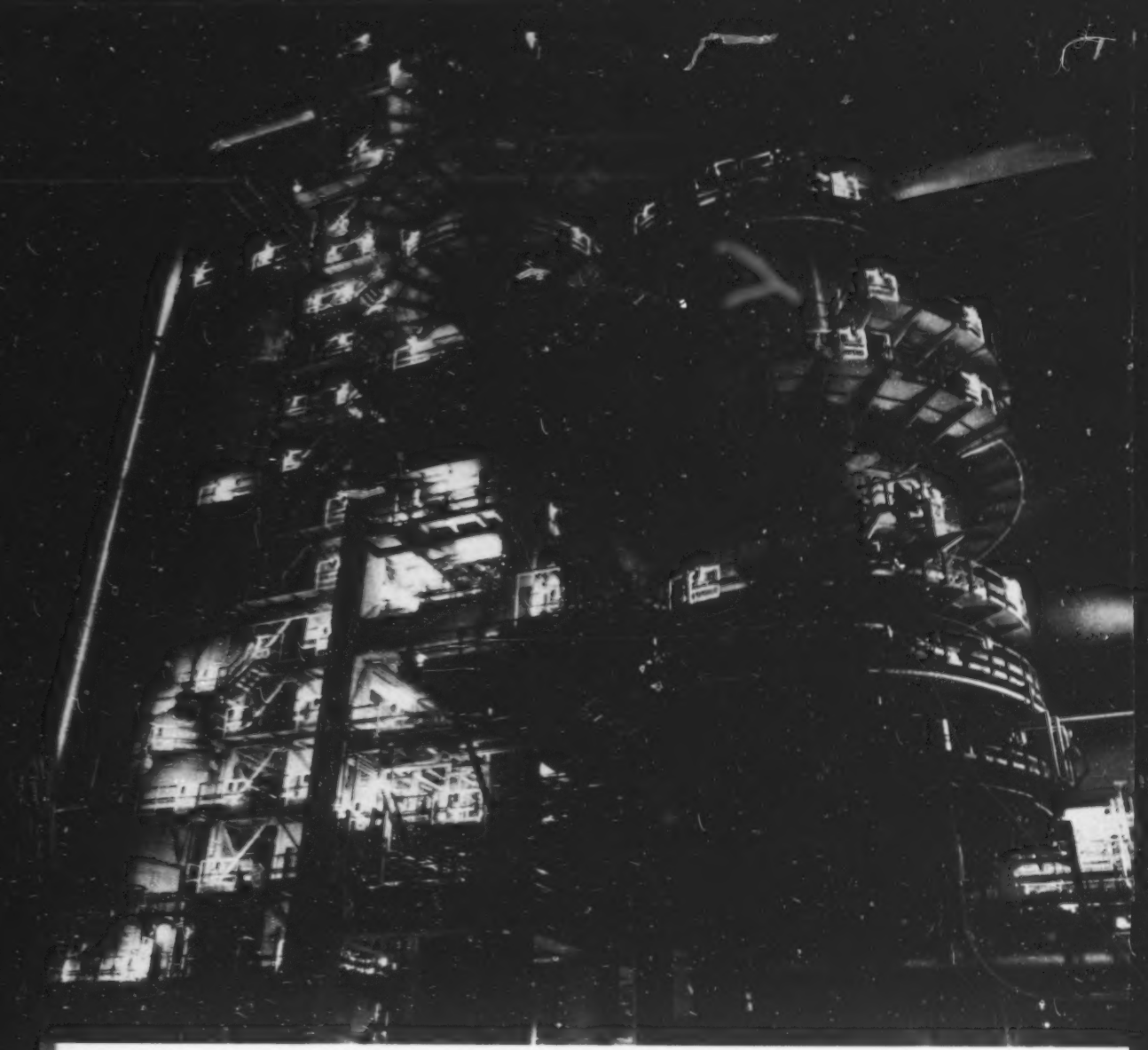
billions of dollars



- The capital invested for tankers in 1984 plummeted $2.2 billion, the most of any single industry segment. The 1984 total of $2.1 billion was less than half the $4.3 billion spent in 1983. A combination of reduced tonnage and lower prices was responsible for the large decline. Pipeline expenditures recovered moderately to $4.9 billion from $4.4 billion in 1983. Greater drilling and production outside of OPEC led to greater pipeline building activity. At the same time, costs of building pipelines did not decline as much as the costs of finding and developing reserves.

- Processing expenditures also declined particularly rapidly as investments for refining facilities decreased by $2.1 billion to $12.6 billion while those for chemical plants dropped by $0.2 billion to $7.4 billion. In 1984, the industry continued to scrap surplus refining capacity and to slow the amount of new capacity coming onstream.

- For the first time since 1981, funds expended for marketing purposes in 1984 increased, by $0.5 billion to reach $5.2 billion. Most of the increase occurred in the United States, where demand for petroleum products recovered considerably more rapidly than elsewhere.



Chase Group Versus Rest of Industry

- In 1984, the capital spending of the Chase Group, whose aggregate financial results are reported annually in a Chase publication entitled *Financial Analysis of a Group of Petroleum Companies,* totaled $39.5 billion, down only $0.1 billion from 1983. Spending by all others in the industry dropped $4.9 billion in 1984 to $67.3 billion.

- In 1984, the cash flow of the Chase Group strengthened relative to that of the rest of the industry. Consequently, the Chase Group was able to increase its relative share of total industry capital spending. The Chase Group accounted for 37 percent of total industry capital investments in 1984, up from 35 percent in 1983.

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Photographs used in this report were furnished through the courtesy of Exxon Corporation and Texaco Inc.

Definitions of Investment Categories

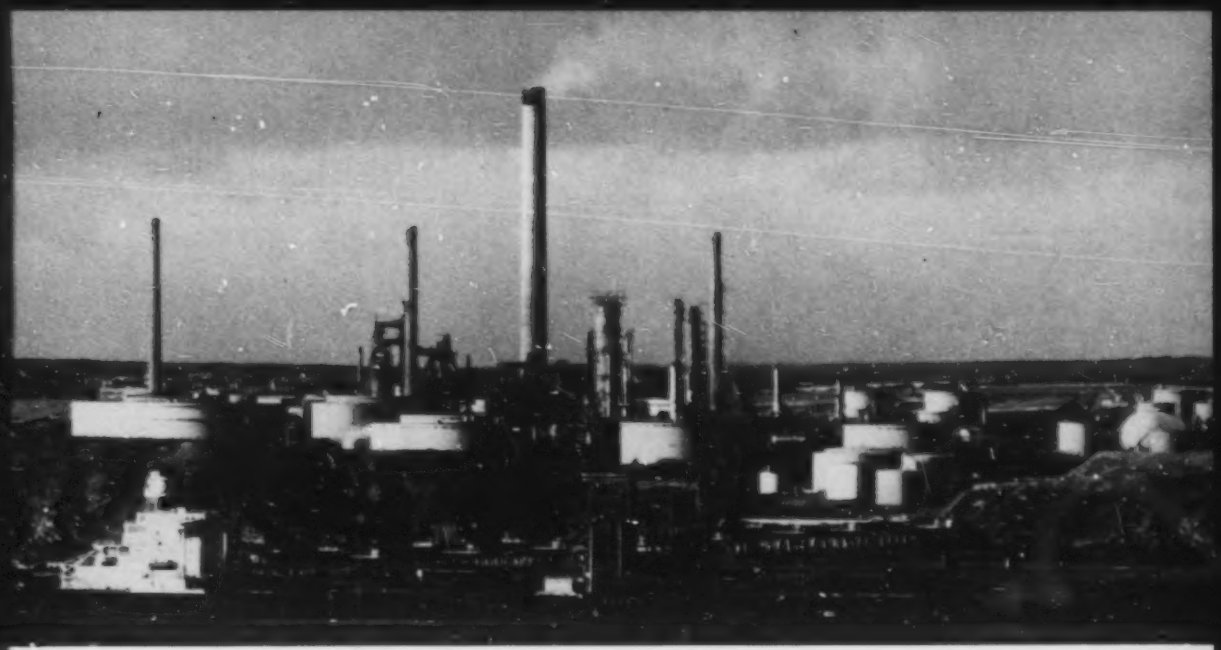
This annual report is intended to cover all capital investments made with regard to crude oil and natural gas production and use. Thus, investments by the petroleum industry for non-petroleum purposes such as coal, nuclear, other minerals, or any type of other business activity are not included. Also excluded are the funds expended by one petroleum entity for the acquisition of already existing petroleum assets from another entity, since the initial expenditures for such assets have been recorded in earlier year investment totals.

The petroleum industry is defined to include five primary functional categories: exploration and production, transportation, processing, marketing and other (primarily general administration). We have made some further category distinctions and their application in this study is indicated here.

Exploration and Production, for purposes of this report, represent the search for and development and production of crude oil and natural gas. It also includes natural gas liquids and liquefaction plants, shown as natural gas liquids plants in the accompanying tables.

Transportation is separated into two categories: pipelines and tankers. Pipelines include crude oil, natural gas and refined liquid product lines. However, not included in pipelines are natural gas transmission pipelines, since they usually come under some form of government rate regulation and are, therefore, more appropriately considered utility operations. Tankers include all vessels used in the transportation of crude oil, refined products, LPG and LNG, regardless of ownership of the vessels.

Processing encompasses the refining of products from crude oil and includes related storage, terminals and chemical plants. The latter covers petrochemicals, plastics and fertilizers. Only the chemical activities of the petroleum companies are included.



Marketing is composed of all service stations, bulk plants, terminals and trucks or other transportation equipment used to deliver products to a marketing facility.

Other primarily consists of administrative and miscellaneous transportation facilities not included in the pipeline, tanker and marketing categories.

In addition, after summarizing the capitalized investments, we report the cost of geological and geophysical expenses, as well as lease rentals. These non-capitalized costs are exploration expenses normally charged against revenue at the time they are incurred.

Chase also publishes a report, entitled *Financial Analysis of a Group of Petroleum Companies,* which contains capital spending data for a number of the larger non-OPEC petroleum companies known as the Chase Group. The capital expenditure data reported in that study include all capital investments made by those companies, including non-petroleum capital expenditures. Thus, investments for coal, nuclear and other minerals, as well as any type of other business activity, would be included.

The Chase publication *World Oil and Gas 1985: Prices, Production, Profits, Capital Spending, and Financing* contains preliminary estimates of capital expenditures for 1985 directly comparable to the historical data in this publication, although in a more aggregated format. This publication contains projections through the year 2000 as well.

SCHEDULE 1 CAPITAL AND EXPLORATION EXPENDITURES
Year 1984

	United States	*Canada*	*Venezuela*
	Million Dollars		
Crude Oil and Natural Gas	37,375	7,650	1,250
Natural Gas Liquids Plants	675	150	225
Total Exploration and Production	38,050	7,800	1,475
Pipe Lines	700	250	50
Tankers	275	0	0
Refineries	3,025	500	100
Chemical Plants	1,175	250	25
Marketing	1,900	275	75
Other	725	150	125
Total Capital Expenditures	45,850	9,225	1,850
Geological & Geophysical Expense and Lease Rentals	4,075	800	125
CAPITAL & EXPLORATION EXPENDITURES	49,925	10,025	1,975

SCHEDULE 2 GROSS INVESTMENT IN FIXED ASSETS
December 31, 1984

Crude Oil and Natural Gas	261,775	44,400	13,925
Natural Gas Liquids Plants	9,025	3,075	925
Total Exploration and Production	270,800	47,475	14,850
Pipe Lines	23,150	2,900	725
Tankers	5,225	0	0
Refineries	41,000	7,175	3,450
Chemical Plants	27,225	2,475	200
Marketing	19,550	3,625	475
Other	8,100	1,625	600
TOTAL GROSS INVESTMENT	395,050	65,275	20,300

SCHEDULE 3 NET INVESTMENT IN FIXED ASSETS
December 31, 1984

Crude Oil and Natural Gas	186,795	38,025	8,010
Natural Gas Liquids Plants	4,815	1,935	650
Total Exploration and Production	191,610	39,960	8,660
Pipe Lines	14,085	1,500	200
Tankers	3,025	0	0
Refineries	22,700	4,195	2,080
Chemical Plants	15,685	1,880	185
Marketing	8,390	1,840	350
Other	4,825	1,320	525
TOTAL NET INVESTMENT	260,320	50,695	12,000

Other Western Hemisphere	Western Europe	Africa	Middle East	Far East	Unallocated	Free World
			Million Dollars			
4,750	7,350	2,350	1,950	5,500	0	68,175
300	300	775	1,250	850	0	4,525
5,050	7,650	3,125	3,200	6,350	0	72,700
375	925	1,175	925	450	0	4,850
0	0	0	0	0	1,775	2,050
725	1,725	850	3,450	2,175	0	12,550
900	975	625	2,750	650	0	7,350
325	1,175	375	350	700	0	5,175
225	275	150	200	250	0	2,100
7,600	12,725	6,300	10,875	10,575	1,775	106,775
575	1,275	450	425	650	0	8,375
8,175	14,000	6,750	11,300	11,225	1,775	115,150
34,625	70,800	19,300	25,225	29,025	0	499,075
3,550	2,925	8,200	16,375	6,925	0	51,000
38,175	73,725	27,500	41,600	35,950	0	550,075
9,525	10,575	8,925	15,550	4,750	0	76,100
0	0	0	0	0	55,325	60,550
14,725	34,375	8,125	23,225	31,050	0	163,125
10,500	17,800	4,450	13,650	5,725	0	82,025
4,000	21,475	3,600	1,925	9,875	0	64,525
2,100	3,675	975	2,400	2,675	0	22,150
79,025	161,625	53,575	98,350	90,025	55,325	1,018,550
25,310	59,740	15,045	14,615	24,480	0	372,020
2,735	2,235	6,355	13,380	5,525	0	37,630
28,045	61,975	21,400	27,995	30,005	0	409,650
5,550	6,890	6,360	10,680	3,550	0	48,815
0	0	0	0	0	43,395	46,420
8,770	16,680	5,765	18,740	19,035	0	97,965
7,780	10,625	3,820	11,765	3,930	0	55,670
1,260	6,740	1,410	1,090	4,210	0	25,290
1,550	2,715	730	1,520	2,065	0	15,250
52,955	105,625	39,485	71,790	62,795	43,395	699,060

SCHEDULE 4 CAPITAL AND EXPLORATION EXPENDITURES

	1974	1975	1976	1977
	Million Dollars			
WORLD				
Crude Oil and Natural Gas	18,765	18,295	23,860	28,680
Natural Gas Liquids Plants	770	960	1,915	3,780
Pipe Lines	2,460	5,995	7,575	6,660
Tankers	8,900	9,240	8,675	3,700
Refineries	7,720	8,725	6,910	8,290
Chemical Plants	1,995	3,145	4,500	6,375
Marketing	2,215	2,160	2,180	2,670
Other	875	1,105	1,110	1,425
Total Capital Expenditures	43,700	49,625	56,725	61,580
Geological & Geophysical Expense and Lease Rentals	2,185	2,325	2,535	3,395
COMBINED	45,885	51,950	59,260	64,975
UNITED STATES				
Crude Oil and Natural Gas	11,225	9,055	13,135	14,855
Natural Gas Liquids Plants	225	325	325	325
Pipe Lines	1,400	3,500	3,625	1,800
Tankers	200	225	275	500
Refineries	1,775	2,100	1,575	1,200
Chemical Plants	825	1,500	2,200	2,500
Marketing	650	650	625	775
Other	325	370	325	445
Total Capital Expenditures	16,625	17,725	22,085	22,400
Geological & Geophysical Expense and Lease Rentals	1,130	1,195	1,375	1,645
COMBINED	17,755	18,920	23,460	24,045
CANADA				
Crude Oil and Natural Gas	1,150	1,125	1,550	2,900
Natural Gas Liquids Plants	150	150	150	125
Pipe Lines	75	160	135	350
Refineries	400	410	325	375
Chemical Plants	30	70	75	125
Marketing	190	175	175	175
Other	80	120	45	75
Total Capital Expenditures	2,075	2,210	2,455	4,125
Geological & Geophysical Expense and Lease Rentals	225	200	250	450
COMBINED	2,300	2,410	2,705	4,575

1978	1979	1980	1981	1982	1983	1984
			Million Dollars			
33,675	44,500	61,300	85,400	88,800	68,525	68,175
4,030	4,565	5,575	7,975	6,875	5,325	4,525
5,780	5,775	6,475	7,075	4,675	4,425	4,850
2,950	2,250	3,400	4,950	4,275	4,300	2,050
10,675	11,775	13,475	17,175	18,200	14,675	12,550
6,650	7,235	8,300	8,400	8,875	7,500	7,350
3,240	3,750	5,050	5,200	5,100	4,675	5,175
1,375	1,775	1,950	2,425	2,625	2,350	2,100
68,375	81,625	105,525	138,600	139,425	111,775	106,775
4,035	5,325	7,625	10,600	9,600	8,425	8,375
72,410	86,950	113,150	149,200	149,025	120,200	115,150
17,325	24,150	32,350	50,775	50,900	36,625	37,375
325	450	750	925	1,375	650	675
750	1,100	1,550	1,025	775	625	700
600	350	600	700	525	375	275
1,750	2,625	3,250	4,600	5,350	3,750	3,025
2,300	2,000	2,400	2,650	2,200	1,350	1,175
950	975	1,300	1,425	1,400	1,375	1,900
475	550	700	900	1,025	850	725
24,475	32,200	42,900	63,000	63,550	45,600	45,850
1,975	2,600	3,850	5,700	4,500	4,250	4,075
26,450	34,800	46,750	68,700	68,050	49,850	49,925
3,200	4,300	5,900	5,575	5,375	6,100	7,650
150	225	300	200	450	200	150
135	125	150	175	200	225	250
400	175	250	625	950	875	500
125	75	100	475	500	400	250
165	150	175	275	275	275	275
65	150	200	250	300	175	150
4,240	5,200	7,075	7,575	8,050	8,250	9,225
500	700	825	925	750	625	800
4,740	5,900	7,900	8,500	8,800	8,875	10,025

SCHEDULE 4 CAPITAL AND EXPLORATION EXPENDITURES *(Continued)*

	1974	1975	1976	1977
	Million Dollars			
VENEZUELA				
Crude Oil and Natural Gas	290	240	250	375
Natural Gas Liquids Plants	15	10	40	5
Pipe Lines	10	0	15	10
Refineries	20	15	10	40
Chemical Plants	0	0	0	0
Marketing	0	10	5	20
Other	0	15	15	30
Total Capital Expenditures	335	290	335	480
Geological & Geophysical Expense and Lease Rentals	30	30	10	50
COMBINED	365	320	345	530
OTHER WESTERN HEMISPHERE				
Crude Oil and Natural Gas	925	950	1,175	1,100
Natural Gas Liquids Plants	50	75	75	200
Pipe Lines	260	625	750	425
Refineries	1,025	1,250	1,100	1,050
Chemical Plants	100	150	475	950
Marketing	125	150	150	175
Other	50	75	100	200
Total Capital Expenditures	2,535	3,275	3,825	4,100
Geological & Geophysical Expense and Lease Rentals	150	150	125	150
COMBINED	2,685	3,425	3,950	4,250
WESTERN EUROPE				
Crude Oil and Natural Gas	2,375	3,600	4,200	5,275
Natural Gas Liquids Plants	40	50	50	225
Pipe Lines	475	1,000	1,100	875
Refineries	2,250	2,350	1,450	2,000
Chemical Plants	850	1,100	1,200	1,300
Marketing	750	700	725	875
Other	180	250	225	325
Total Capital Expenditures	6,920	9,050	8,950	10,875
Geological & Geophysical Expense and Lease Rentals	225	300	325	450
COMBINED	7,145	9,350	9,275	11,325

1978	1979	1980	1981	1982	1983	1984
			Million Dollars			
700	800	1,000	1,450	2,300	2,050	1,250
5	15	25	200	50	150	225
20	25	75	25	25	25	50
175	425	675	600	600	175	100
0	10	25	50	50	50	25
25	25	75	75	75	75	75
60	25	50	50	100	150	125
985	1,325	1,925	2,450	3,200	2,675	1,850
60	200	400	450	525	300	125
1,045	1,525	2,325	2,900	3,725	2,975	1,975
1,900	2,650	3,650	5,250	6,100	5,025	4,750
250	325	325	700	600	525	300
1,550	1,200	825	725	650	400	375
1,000	1,175	1,050	1,175	900	775	725
1,075	1,375	1,225	1,150	1,200	1,050	900
225	250	250	300	350	275	325
175	125	200	225	225	200	225
6,175	7,100	7,525	9,525	10,025	8,250	7,600
200	300	450	600	750	550	575
6,375	7,400	7,975	10,125	10,775	8,800	8,175
5,975	7,200	10,500	10,300	10,500	8,100	7,350
200	350	400	400	350	300	300
950	700	550	750	625	850	925
2,500	2,525	2,950	3,075	2,600	2,050	1,725
1,500	1,600	1,800	1,250	1,550	1,025	975
1,100	1,400	2,125	1,850	1,525	1,325	1,175
250	300	300	325	300	300	275
12,475	14,075	18,625	17,950	17,450	13,950	12,725
475	550	750	1,025	1,275	1,100	1,275
12,950	14,625	19,375	18,975	18,725	15,050	14,000

SCHEDULE 4 CAPITAL AND EXPLORATION EXPENDITURES *(Continued)*

	1974	1975	1976	1977
	Million Dollars			
AFRICA				
Crude Oil and Natural Gas	750	825	1,000	950
Natural Gas Liquids Plants	140	175	200	600
Pipe Lines	50	250	525	525
Refineries	150	250	375	900
Chemical Plants	25	50	150	300
Marketing	75	100	125	175
Other	25	25	50	100
Total Capital Expenditures	1,215	1,675	2,425	3,550
Geological & Geophysical Expense and Lease Rentals	150	200	175	300
COMBINED	1,365	1,875	2,600	3,850
MIDDLE EAST				
Crude Oil and Natural Gas	975	1,000	1,375	1,925
Natural Gas Liquids Plants	25	25	675	1,400
Pipe Lines	120	350	1,250	2,150
Refineries	450	400	925	1,250
Chemical Plants	40	50	150	900
Marketing	25	25	25	50
Other	135	175	275	125
Total Capital Expenditures	1,770	2,025	4,675	7,800
Geological & Geophysical Expense and Lease Rentals	50	50	75	125
COMBINED	1,820	2,075	4,750	7,925
FAR EAST				
Crude Oil and Natural Gas	1,075	1,500	1,175	1,300
Natural Gas Liquids Plants	125	150	400	900
Pipe Lines	70	110	175	525
Refineries	1,650	1,950	1,150	1,475
Chemical Plants	125	225	250	300
Marketing	400	350	350	425
Other	80	75	75	125
Total Capital Expenditures	3,525	4,360	3,575	5,050
Geological & Geophysical Expense and Lease Rentals	225	200	200	225
COMBINED	3,750	4,560	3,775	5,275
FOREIGN FLAG TANKERS	8,700	9,015	8,400	3,200

1978	1979	1980	1981	1982	1983	1984
			Million Dollars			
1,275	1,650	2,300	3,450	3,750	2,775	2,350
900	1,000	800	1,200	1,025	900	775
625	550	575	1,250	900	1,100	1,175
1,175	800	750	1,125	750	625	850
400	500	575	725	700	600	625
200	225	225	275	325	350	375
75	75	50	75	125	150	150
4,650	4,800	5,275	8,100	7,575	6,500	6,300
375	350	500	800	675	525	450
5,025	5,150	5,775	8,900	8,250	7,025	6,750
1,550	1,700	2,450	3,500	3,675	2,600	1,950
1,500	1,650	2,500	3,700	2,225	1,525	1,250
1,400	1,550	2,200	2,500	975	725	925
2,050	2,100	2,350	3,125	3,600	3,300	3,450
1,000	1,200	1,750	1,350	1,975	2,450	2,750
50	100	125	200	275	325	350
100	125	150	250	225	225	200
7,650	8,425	11,525	14,625	12,950	11,150	10,875
150	175	200	250	325	375	425
7,800	8,600	11,725	14,875	13,275	11,525	11,300
1,750	2,050	3,150	5,100	6,200	5,250	5,500
700	550	475	650	800	1,075	850
350	525	550	625	525	475	450
1,625	1,950	2,200	2,850	3,450	3,125	2,175
250	475	425	750	700	575	650
525	625	775	800	875	675	700
175	425	300	350	325	300	250
5,375	6,600	7,875	11,125	12,875	11,475	10,575
300	450	650	850	800	700	650
5,675	7,050	8,525	11,975	13,675	12,175	11,225
2,350	1,900	2,800	4,250	3,750	3,925	1,775

SCHEDULE 5 EXPLORATION AND PRODUCTION EXPENDITURES – UNITED STATES – 1974 – 1984

(Excludes Natural Gas Liquids Plants)

	1974	1975	1976
	Million Dollars		
Lease Acquisitions – Onshore	700	500	600
Lease Acquisitions – Offshore	5,100	1,200	2,275
Total	5,800	1,700	2,875
Producing Wells	3,975	5,515	8,055
Dry Holes	1,450	1,840	2,205
Total Capitalized	11,225	9,055	13,135
Geological & Geophysical Expense	925	980	1,150
Lease Rentals	205	215	225
Total Exploration & Production Expenditures	12,355	10,250	14,510

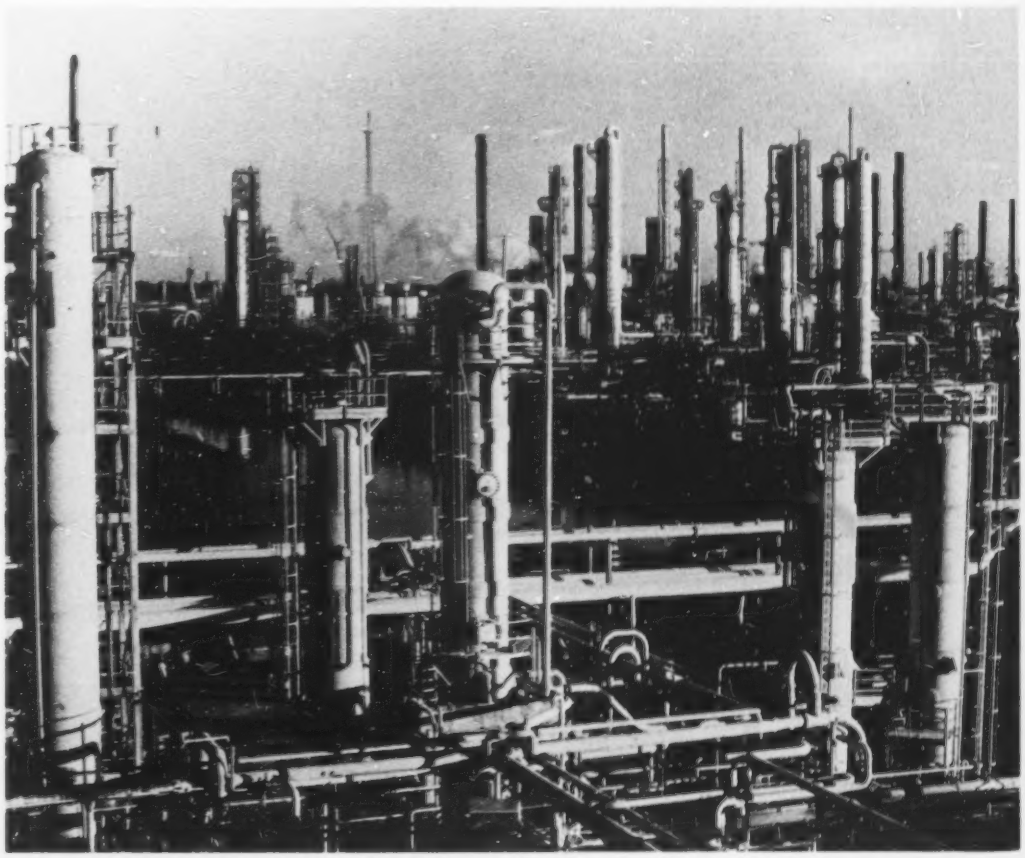
	1977	1978	1979	1980
Lease Acquisitions – Onshore	650	700	800	1,025
Lease Acquisitions – Offshore	1,675	1,850	4,600	5,100
Total	2,325	2,550	5,400	6,125
Producing Wells	9,645	10,875	13,600	19,350
Dry Holes	2,885	3,900	5,150	6,875
Total Capitalized	14,855	17,325	24,150	32,350
Geological & Geophysical Expense	1,400	1,700	2,275	3,425
Lease Rentals	245	275	325	425
Total Exploration & Production Expenditures	16,500	19,300	26,750	36,200

	1981	1982	1983	1984
Lease Acquisitions – Onshore	1,650	1,150	900	875
Lease Acquisitions – Offshore	7,000	4,400	6,050	4,350
Total	8,650	5,550	6,950	5,225
Producing Wells	30,700	33,075	21,950	23,725
Dry Holes	11,425	12,275	7,725	8,425
Total Capitalized	50,775	50,900	36,625	37,375
Geological & Geophysical Expense	5,100	4,000	3,800	3,650
Lease Rentals	600	500	450	425
Total Exploration & Production Expenditures	56,475	55,400	40,875	41,450

SCHEDULE 6 CAPITAL EXPENDITURES CHASE GROUP VERSUS REST OF INDUSTRY

	1984	1983	1975	Distribution 1984	1983	1975
	(Billion Dollars)			*(Percent of Total)*		
Chase Group*	39.5	39.6	20.3	37.0	35.4	40.9
Rest of Industry	67.3	72.2	29.3	63.0	64.6	59.1
Total	106.8	111.8	49.6	100.0	100.0	100.0

*The Chase Group refers to companies included in the Chase publication, ***Financial Analysis of a Group of Petroleum Companies.*** As explained on page 13, the numbers shown here for the Group refer to the aggregate value of all investment related to petroleum only, while the capital spending numbers included in ***Financial Analysis of a Group of Petroleum Companies*** cover spending for all activities.



GLOBAL SPECIALIZED INDUSTRIES

David F. Banks, *Senior Vice President*

GROUP STAFF CREDIT

James T. Beale, Jr., *Vice President*

GLOBAL PETROLEUM DIVISION

Robert B. Weaver, *Senior Vice President*

Multinational Oil Companies

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